BRAUN MILLENNIUM SERIES

Service Manual for:

NL

Millennium Series

Public Use Wheelchair Lifts

Series A5

DOT — Public Use Lift

"DOT — Public Use Lift" verifies that this platform lift meets the "public use lift" requirements of FMVSS No. 403. This lift may be installed on all vehicles appropriate for the size and weight of the lift, but must be installed on buses, school buses, and multi-purpose passenger vehicles other than motor homes with a gross vehicle weight rating (GVWR) that exceeds 4,536 kg (10,000 lb).

WARNING
Manual
Read manual before installing or servicing lift. Failure to do so may result in serious bodily injury and/or property damage.

THE BRAUN CORPORATION®
"Providing Access to the World"®
International Corporate Hdqrs: P.O. Box 310 Winamac, IN 46996 USA
1-800-THE LIFT® (574) 946-6153 FAX: (574) 946-4670

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Patent #5,261,779
Patent #6,065,924
Patent #6,238,169
Patent #6,464,447
Patent #6,599,079
Patent #6,692,217
Patent #6,739,824
Patents Pending

Braun NL Series

Congratulations

We at The Braun Corporation wish to express our fullest appreciation on your new purchase. With you in mind, our skilled craftsmen have designed and assembled the finest lift available.

This manual provides service-related material. Refer to the FMVSS No. 403 Quick Reference Installation Sheet for installation instructions, operating instructions and maintenance procedures.

Braun Millennium Series™ lifts are built for dependability and will provide years of pleasure and independence as long as the lift is installed and serviced as specified by a Braun certified technician, and the lift is operated by an instructed person.

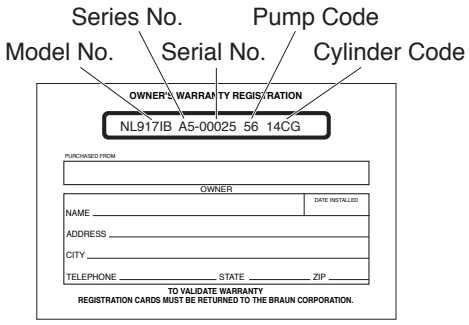
Sincerely,
THE BRAUN CORPORATION

Ralph W. Braun
Chief Executive Officer

Warranty and Registration Instructions

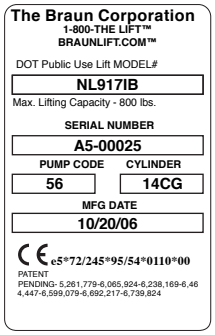
Immediately upon receiving the lift, examine the unit for any damage. Notify the carrier at once with any claims.

Two warranty/registration cards (shown right) are located in the lift-mounted manual storage pouch. The sales representative must process one of the cards. The consumer must fill out the other card and mail it to The Braun Corporation. The warranty is provided on the back cover of this manual. The **warranty cards must be processed to activate the warranty**.



Sample Warranty/Registration Card

Two Braun Serial No./Series No. identification tags (shown below) are posted on the lift. One I.D. tag is posted on the opposite pump side vertical arm. A second I.D. tag is located on the opposite pump side tower. Both I.D. tags provide the product identification information provided on the warranty/registration card. Record the information in the space provided (or document on a copy). **This information must be provided when filing a warranty claim or ordering parts**.



Sample Serial No./Series No. Identification Tag

Model No. _____

Series No. _____

Serial No. _____

Pump Code _____

Cylinder Code _____

Date of Manufacture _____

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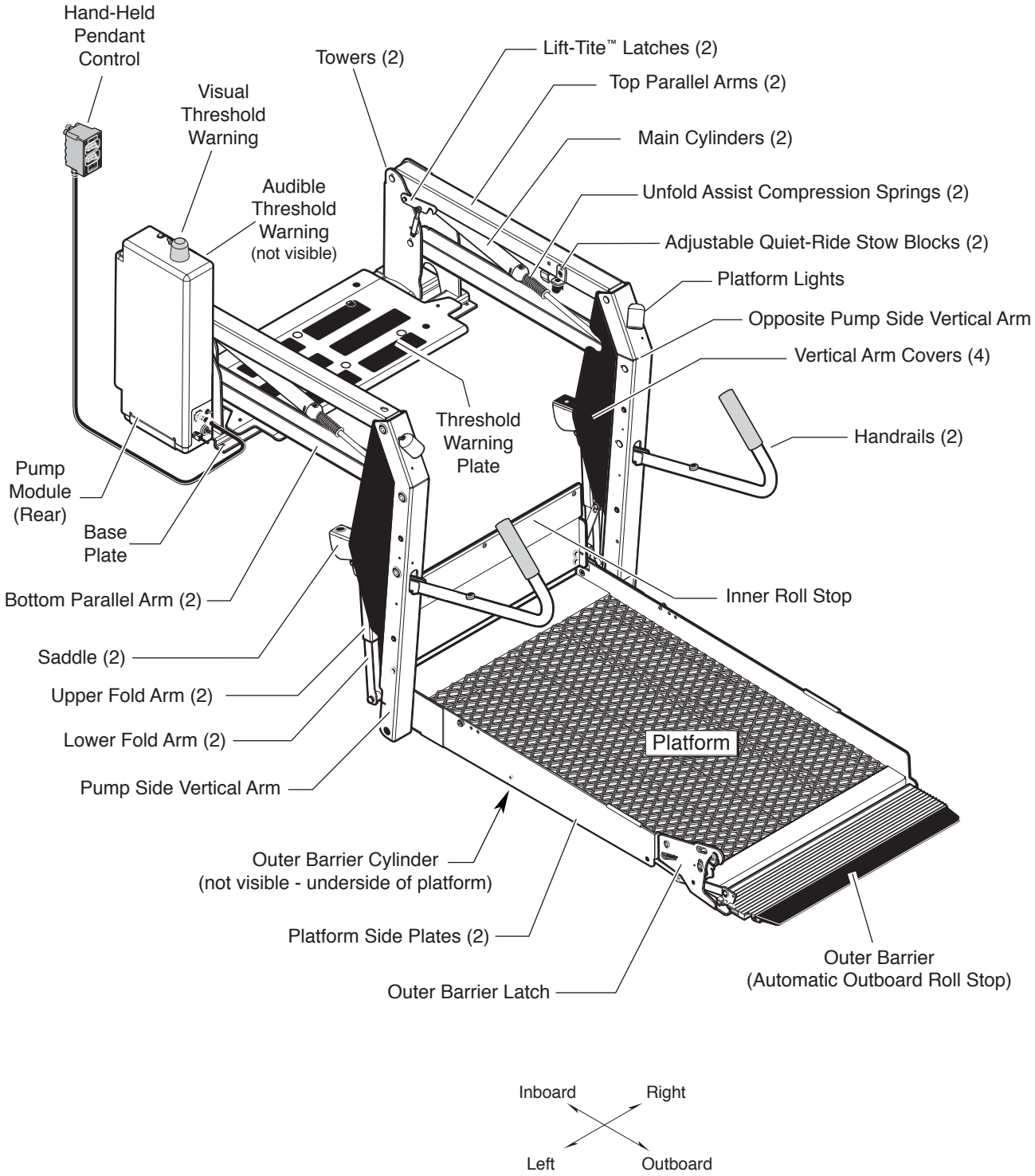
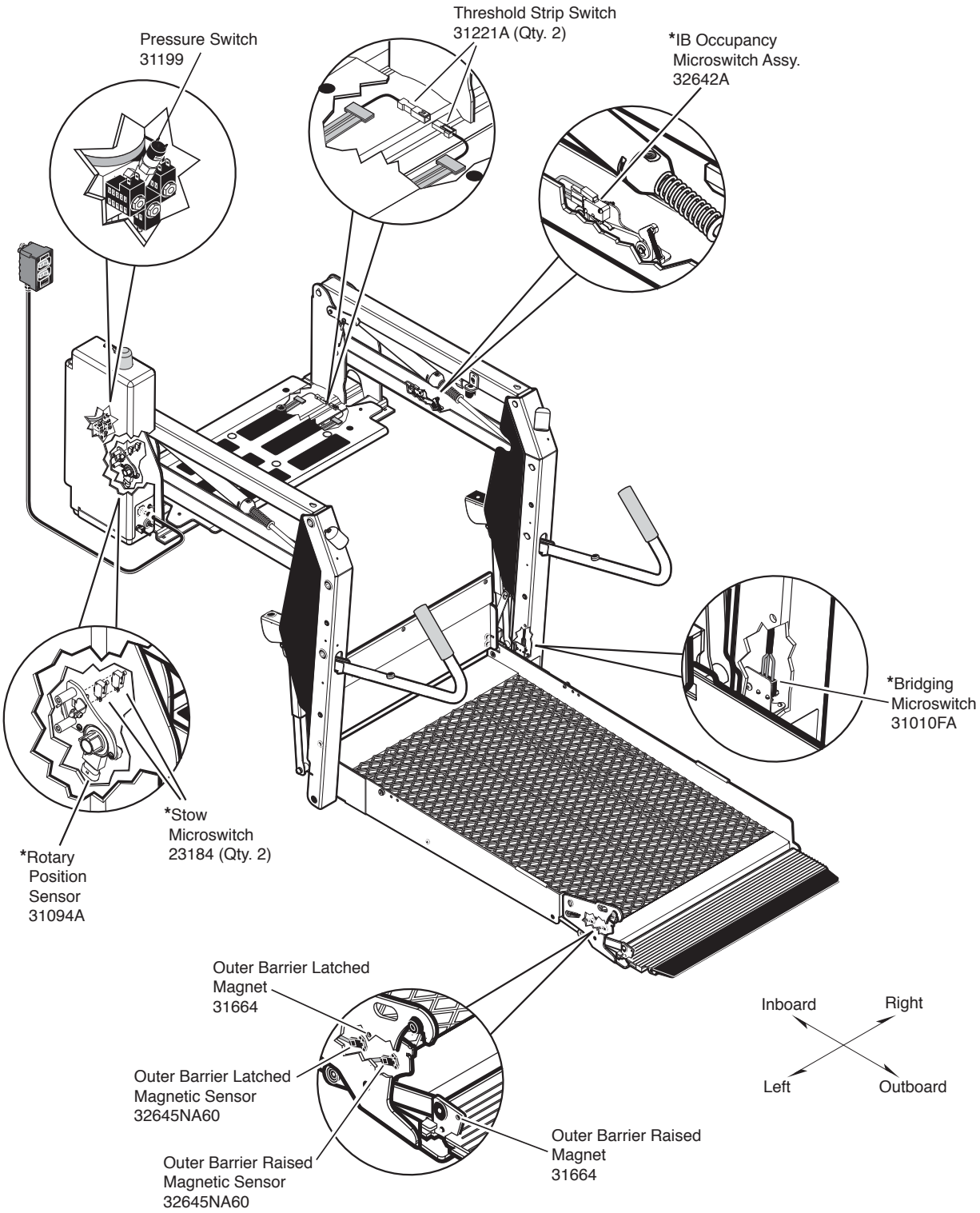
Lift Terminology



Switch and Sensor Locations



*Note: Mirror image for right (front) pump lifts.

Certification Checklist Diagnostic Procedures

The following operations and conditions must be functionally verified in order for the lift to be FMVSS 403/404 compliant. If an operation does not function as described or a condition is not met, follow the referenced procedures to correct the problem or contact a Braun Corporation Product Support representative at 1-800-THE LIFT®.

• Vehicle movement is prevented unless lift door is closed, ensuring the lift is stowed.

1. Verify lift stowed signal - pin 7 on the pump module has a +12 volt signal OR pin 9 has a ground signal (depends on interlock used).
2. Refer to the interlock installation instructions.

• Lift operation shall be prevented unless the vehicle is stopped and vehicle movement is prevented.

1. Verify vehicle secure signal (pin 6) has a +12 volt signal.
2. Refer to the interlock installation instructions.

• The platform will not fold/stow if occupied.

- Refer to Platform Fold Pressure Adjustment procedures.

• The inner roll stop will not raise if occupied.

- Call Product Support

• The outer barrier will not raise if occupied.

- Refer to Outer Barrier Fold Pressure Adjustment

• Verify platform lighting when lift is deployed and pendant illumination when lift is powered.

1. Replace bulb(s) in the light housing.
2. Check fuse (5 amp fuse on circuit board; F13)

• A visual and audible warning will activate if the threshold area is occupied when the platform is a least one inch below floor level.

1. Remove the threshold warning plate
2. Verify the threshold strip switch connectors are connected (see illustration on Page 3)
3. Replace the threshold strip switch
4. Reinstall the threshold warning plate

• Platform movement is prohibited beyond the position where the inner roll stop is fully deployed (up).

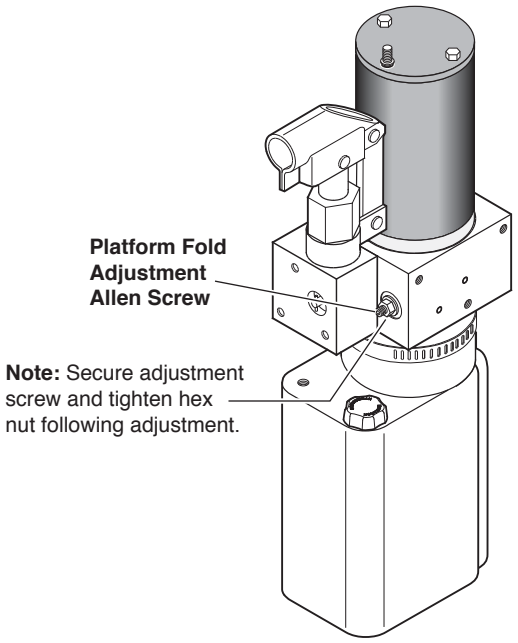
- Call Product Support.

• Lift platform movement shall be interrupted unless the outer barrier is deployed (up).

- Call Product Support.

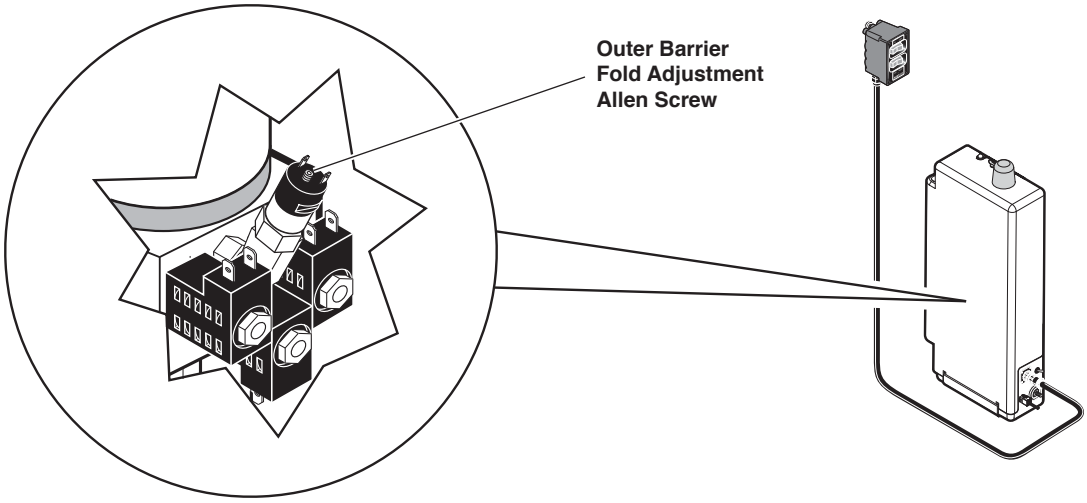
Platform Fold Pressure Adjustment

1. Position the platform at the floor level loading position.
2. Loosen the hex nut on the adjustment screw (do not remove hex nut).
3. Turn the adjustment screw counter clockwise until the platform does not fold when the Fold button is pressed.
4. Turn the adjustment screw clockwise in 1/4 turn increments and press the Fold button until the platform folds completely (Note: Return the platform to floor level position after each attempt to fold the platform).
5. Turn the adjustment screw an additional 1/8 turn after the platform folds successfully.
6. Tighten the hex nut without moving the adjustment screw.
7. Verify the platform will not stow while occupied.



Outer Barrier Fold Pressure Adjustment

1. Lower the platform to the ground level loading position.
2. Remove the pump cover.
3. Turn the adjustment screw (shown below) counter clockwise until the outer barrier does not raise when the Up button is pressed.
4. Turn the adjustment screw clockwise in 1/4 turn increments until the outer barrier raises and fully locks in position when the Up button is pressed. DO NOT turn the adjustment screw beyond this position.
5. Verify the outer barrier will not raise when occupied.
6. Reattach the pump cover.



Platform Angle Adjustment

Adjusting the platform angle based on the relationship of the platform at ground level directly affects the angle of the platform when positioned at floor level.

Unfold the lift and visually examine the angle of the platform when positioned at floor level. Lower the platform fully and note the angle of the platform when it reaches ground level also. The **outboard end of the platform** (toe) **must contact the ground first** when the platform is lowered (all lift models).

Millennium "NL" Series:

The platform angle **should** be adjusted so there is a balance between the angle at both positions (**equal amount of angle**). **Angle A** should **equal angle B** as shown in Figure C.

Century "NCL" Series:
Vista "NVL" Series:

The platform angle **must** be adjusted so the outboard end of the platform (toe) is angled down slightly when positioned at floor level. See Figure D. The outboard end of the platform **must** contact the ground first to **ensure** the spring-loaded outer **barrier unfolds fully**.

Adjustment Procedures: Adjustment Allen screws are provided on each side of the lift platform for adjusting the platform angle. Details and photos are provided on the opposite page.

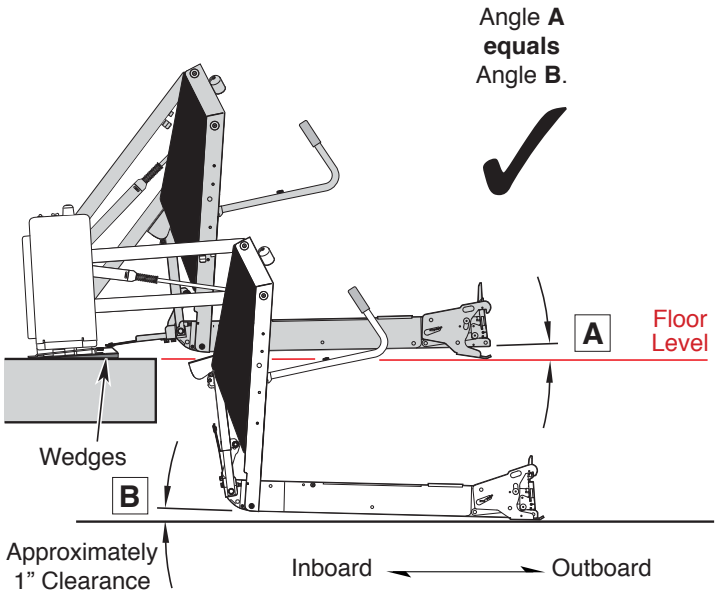
Base Plate Wedges: Installations where base plate wedges are used require more platform angle adjustment than normal.

Platform Stop Blocks: When adjusting platform angle, ensure both **stop blocks are making full contact with the vertical arms** (details on opposite page).

Floor Level Adjustment: Following platform angle adjustment, set floor level positioning as detailed in **Platform Floor Level Adjustment** (details on page 8).

Millennium "NL" Series

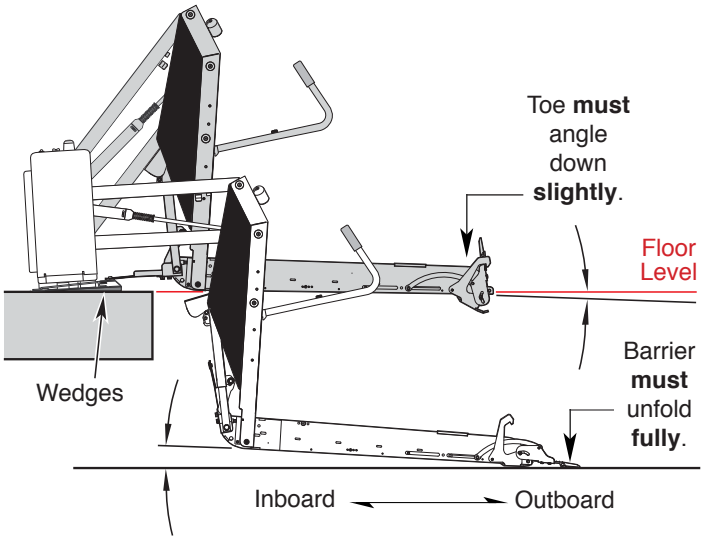
Figure C



Century "NCL" Series

Vista "NVL" Series

Figure D



Platform Angle Adjustment

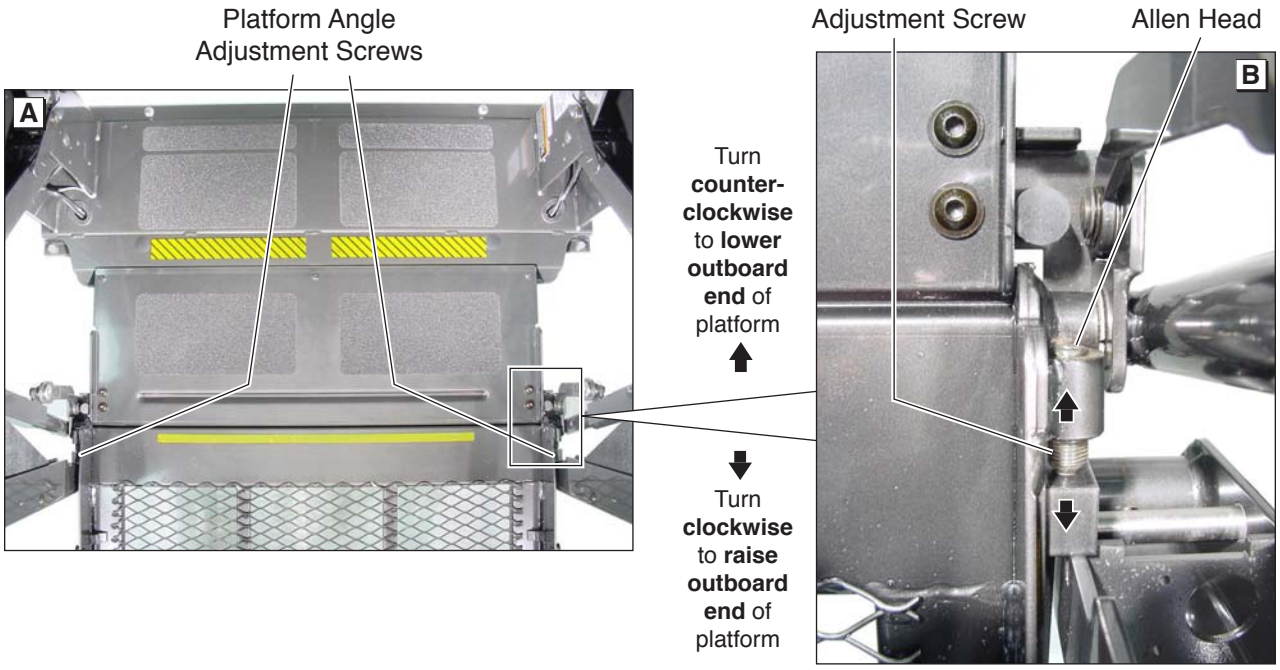
Adjustment Allen screws are provided on each side of the lift platform for adjusting the platform angle. Adjust platform angle as specified on previous page.

To **raise** the **outboard end** of platform - turn adjustment screw **clockwise**.

To **lower** the **outboard end** of platform - turn adjustment screw **counterclockwise**.

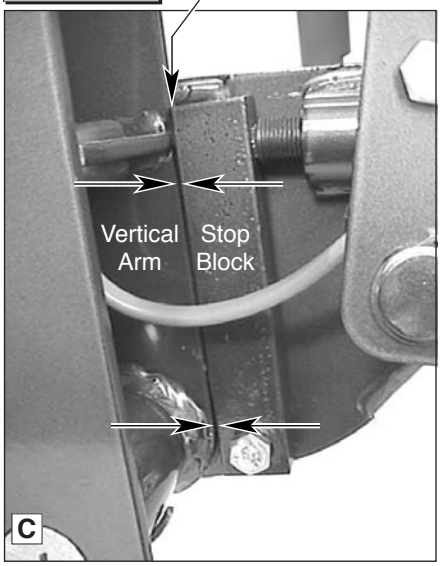
Note: Both adjustment screws **must be adjusted equally**.

Apply Loctite® to adjustment screws following adjustment.



Platform Stop Blocks

Right **Must make full contact**.

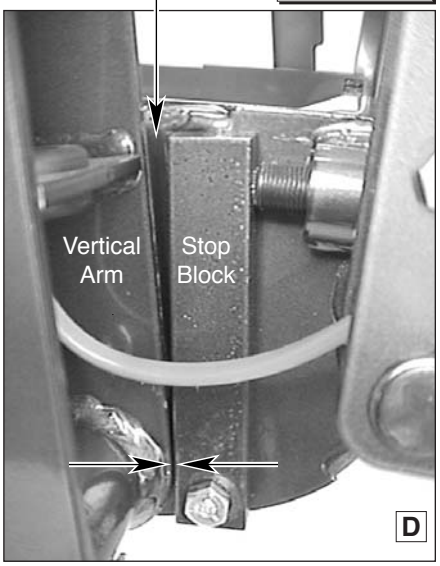


Stop Block Guideline
All Lift Models

Both stop blocks **must make full contact** with the edge of vertical arms.

When adjusting platform angle, setting floor level position or adjusting bridging microswitch - **ensure both stop blocks are making full contact with the vertical arms**.

Gap **not permitted**. **Wrong**



Platform Floor Level Adjustment

Before setting floor level position:

- Adjust platform angle as detailed on page 6.
- Ensure both **stop blocks are making full contact with vertical arms** (details on page 7).

Floor Level Adjustment:

1. Position platform at desired floor level position (passenger loading/unloading height).

   Position platform such that:
   a. the inner roll stop is laying flat on the threshold plate
   b. platform has **not** begun to fold

   Note: Use hand pump to position platform at proper position if unable to stop platform when powering lift.

2. Turn Lift Power switch Off.
3. Press Floor Position Set button (located between pump housing and lift tower).
4. While pressing the Floor Position Set button, turn the Lift Power switch On.
5. Continue pressing the Floor Position Set button until the lift sounds three “beeps.”
6. Release the Floor Position Set button.
7. Cycle lift to verify that platform stops at the set floor level position. **Note:** If platform does not stop at the intended position - repeat adjustment procedures. If repeating procedures fails - refer to Diagnostics section below.

Floor Level Set Button

Diagnostics: Diagnostic codes have been established in event the lift platform floor position does not set (the lift does not sound three “beeps” - see Step 5 above). The control board located inside the pump housing is equipped with an LCD screen. Remove the pump cover to access the LCD screen. The following diagnostic codes will help resolve floor position setting problems:

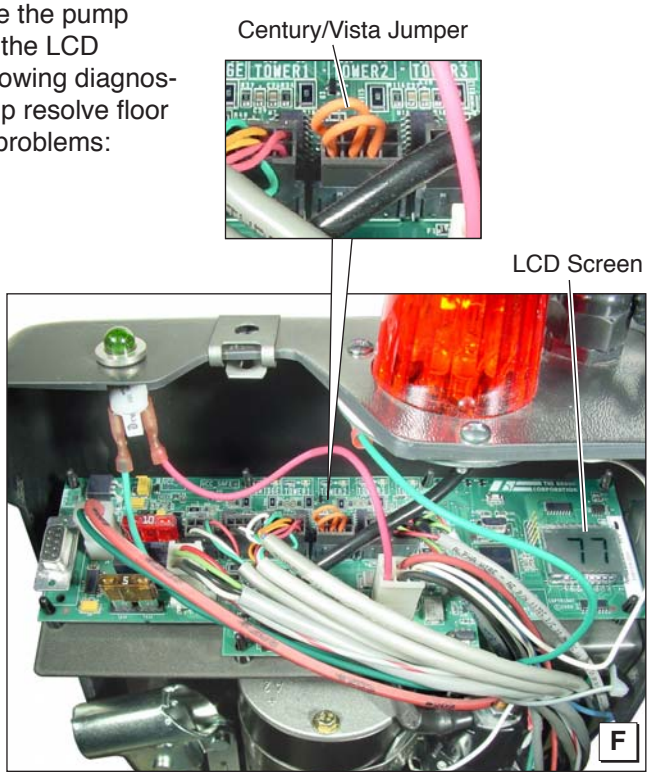
91 – The platform position is out of a predetermined acceptable range

92 – The Bridging Microswitch is not activated (adjust switch or lower the platform)

93 – The Inner Roll Stop Occupied switch is not activated (adjust switch)

94 – The Outer Barrier Up switch is not activated (adjust switch)

95 – The Outer Barrier Latched sensor is not activated (Century and Vista: Verify jumper is installed on the outboard barrier latch switch – see photo at right; Millennium: Check latch)



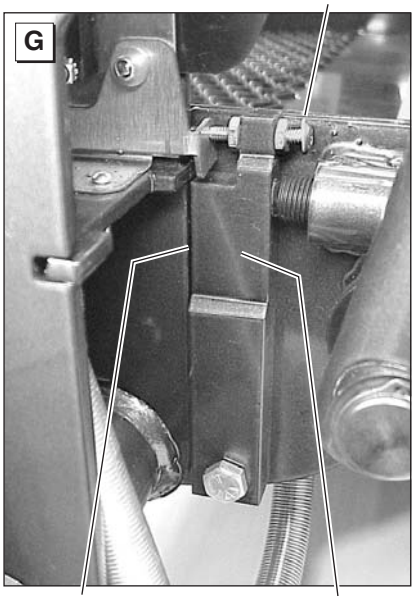
Bridging Microswitch Adjustment

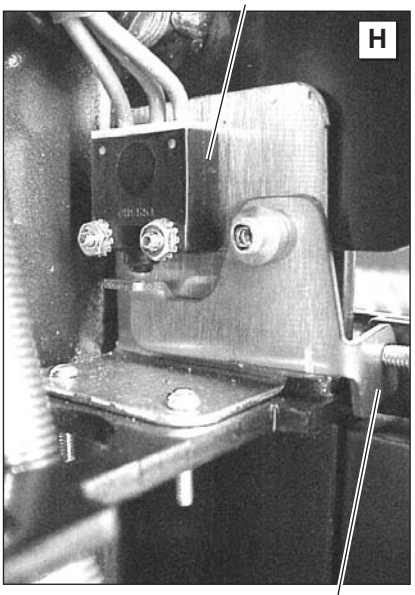
Bridging Microswitch:

The bridging microswitch is located at the bottom of the right (front) vertical arm. See Photos A and B. An adjustment screw is built into the platform stop block.

The bridging microswitch will be deactivated if the outboard end of the platform contacts the unloading surface before the inboard end while the DOWN switch is pressed.

The deactivated bridging microswitch interrupts power to the DOWN switch circuit and stops the down travel of the platform (while allowing the outer barrier to deploy).





Adjustment Guidelines:

Caution: This adjustment is factory set and typically should not require adjustment.

Before adjusting the bridging microswitch:

- Adjust platform angle as detailed on page 6.
- Adjust floor level position as detailed on page 8.
- **Ensure** platform is in the fully unfolded position.
- **Ensure** both stop blocks are making full contact with vertical arms (details on page 7).

Failure to follow these guidelines will result in an overtight adjustment that will bend the adjustment screw, break the bridging switch and/or result in lift operation failure.

Bridging Microswitch Adjustment

1. Position the platform at floor level (or slightly below). Ensure the platform is not partially folded. From the stowed position, press the UNFOLD switch until the pump stops running and the platform comes to a full stop. From below floor level, press the UP switch until the pump stops running and the platform comes to a full stop.
2. Check **both** platform stop blocks to **ensure there is no gap** between the stop blocks and the vertical arms. See Photos B, C and D on page 7. A gap may indicate that the platform is not fully unfolded or the platform angle adjustment bolts are not adjusted equally on both sides.
3. Loosen the two jam nuts on the bridging switch activation screw (see Photo G). Tighten the screw until the activation lever is fully depressed. Verify that there is no play in the activation lever and tighten the jam nuts.
4. Test lift for proper operation.

LCD Lift Codes

To better understand the Braun LCD Trouble shooting display you must first understand the numbers that appear on the screen. There are Flashing Codes, Solid Error Codes, and Solid Normal Operational Codes.

Flashing Codes #65-89: About 10 seconds after an operation has stopped there are a set of scrolling flashing numbers that indicate whenever a particular sensor or switch has been activated. These numbers will start at number 65 and scroll up to number 89, then start the sequence over. Remember they are not error codes. Keep in mind that the lift will display codes for different positions and certain flashing codes must be present for that position, you will not always get an error code.

Solid Error Codes #50-64: These are the numbers that will come on the screen when the audible and visual alarm goes off, and will direct you to where the problem exists. These numbers will only stay on the screen for about 10 seconds and then the flashing codes will scroll indicating what sensors are active. This sequence of codes will keep repeating. It is important to be looking at the screen when trying to get the lift to fail.

Solid Normal Operational Codes: There are also solid numbers that will appear while and after the lift is moving that indicate the lift operation and platform position.

Troubleshooting Procedures

1. While **looking** at the LCD screen, operate the lift until the failure occurs. Read the number that comes on the display the moment the alarm goes off and the light starts to flash. This code will only stay on the screen for 10 seconds.

2. Look up the number on the correct error code sheet and determine what part on the lift is causing the failure. Go to the part on the lift that is suspected of causing the failure and look for anything obvious like magnets missing, broken wires etc. If nothing is found, the next step is to determine if that sensor is sending a signal to the board.

3. Bring the platform to the level that the sensor should be activated using the backup pump if needed. At this point, look up the flashing code that corresponds to that sensor in the error code sheet, look at the LCD screen and wait for the flashing scrolling numbers to appear. If the number is not included in the scrolling numbers, you know that sensor is the problem. You should then check the harness or try another magnet with the south side of the magnet facing the sensor and see if the number will come up on the display.

4. If the problem is still not found or the harness is suspected, the voltages should to be checked to and from the sensor to find the exact location of the problem. First determine the 3 wire colors for this sensor at the board and understand the 3 voltage readings needed to operate the sensor, the 12V power, 8V power, and the 8V input signal to the PC board when activated by a magnet. First check for a 8V input signal coming from the sensor to the wire going into the PC board, if there is 11V on this wire, the sensor is not being activated by the magnet. Next check the 12V and 8V wires at the PC board plug leading to the sensor. Once verified at the plug on the PC board, the voltages should then be checked at the next plug down on the harness going to the sensor until the location of the problem is found.

Anytime you see the code for that specific switch you will have 8 volts on that colored wire on the 8 or 18 pin connector from that switch. IE: Outboard Barrier is closed “72” will appear on the screen and also 8V will be present on the signal wire from that switch, if no code is present the voltage will be 11V.

LCD Lift Codes

Listed below are codes that the lift controller outputs during lift operation. The codes will be displayed on an LCD screen located on the lift control board inside the pump module. See the Manual Operating Instructions in the operator's manual for pump cover removal instructions.

Non-Flashing Numbers

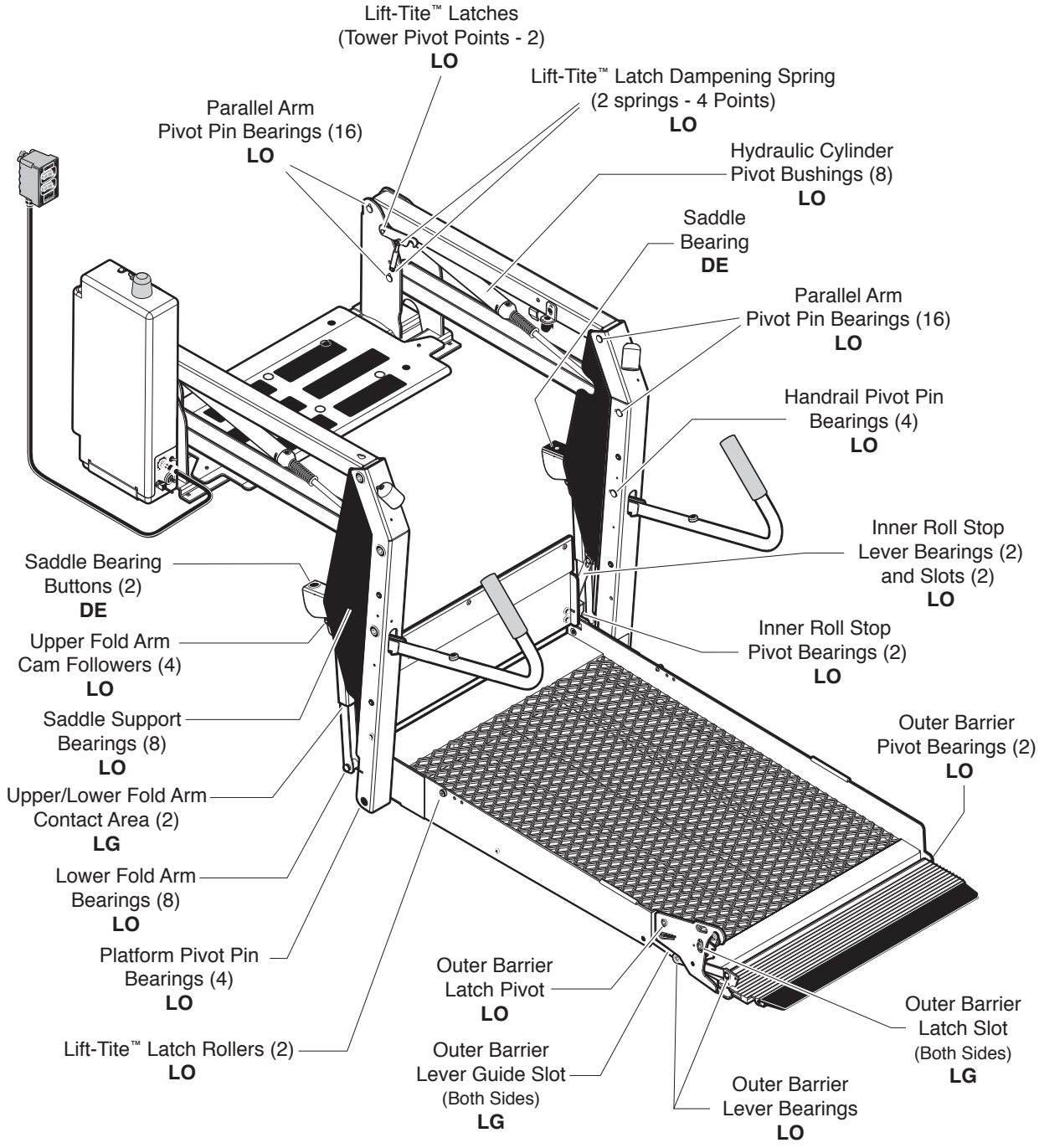
01 – Platform stowed
02 – Platform unfolding
03 – Platform unfolding paused
04 – Platform at floor level
05 – Platform beginning to lower
06 – Platform lowering (threshold cannot be occupied from this point down)
07 – Outer barrier moving to horizontal position
08 – Platform at ground level
09 – Outer barrier moving to vertical position
10 – Platform raising
11 – Platform raising paused at floor
12 – Platform folding (limited pressure)
13 – Platform folding (full pressure)
14 – Timed fold (cinching Lift-Tite™) or (anti-rattle state)
15 – Platform folding stopped
16 – Paused fold
17 – Platform between ground and 3" above ground
18 – Platform above 3"
19 – Outer barrier moving to horizontal position
23 Outer barrier going back down after occupant detected
28 – Illegal function/not defined
29 – Interlock fault not recognized (or has been cleared but a motion button is still pressed)
30 – Platform location unknown
31 – Platform location transition state; attempting to locate position
35 – Two or more motion buttons are being pressed
36 – The retention belt cannot be buckled while trying to fold or unfold
37 – Motion button being pressed is not a valid motion
50 – Outer barrier is not up above inboard barrier locked position
51 – Threshold is occupied when platform is 1" or more below floor level
52 – Inner roll stop is not up and locked below inner roll stop locked position
53 – Inner roll stop occupied sensor is not activated between floor and inner roll stop up position
54 – Outer barrier is occupied before it is up
55 – Outer barrier is not latched when above the inner roll stop locked position (Millennium only)
56 – Outer barrier is not up and latched and bridge switch did not deactivate
57 – Outer barrier is not up and latched and ground detect switch did not deactivate (Century and Vista only)
58 – Outer barrier is not up and latched and the platform is 3" above the ground
59 – Outer barrier is not up after pausing platform travel
60 – The kick out gas springs are worn, replace before using
75 – Low voltage detected; must turn off power switch to reset LCD
77 – Vehicle secure interlock has not been activated
90 – Position will be set if you keep holding the button until it beeps
91 – Position is out of a predetermined acceptable range of floor position
92 – Bridge switch is not made, needs adjusting
93 – Inner roll stop occupied switch is not made, position needs to be moved or switch should be adjusted
94 – Outer barrier is not made, fix and try again
95 – Outer barrier latch is not made (check for jumper on Century and Vista lifts, check latch on Millennium lifts)
99 – Controller program is not valid; replace controller

Flashing Numbers

Flashing 65 – Unfold button is pressed
Flashing 66 – Fold button is pressed
Flashing 67 – Down button is pressed
Flashing 68 – Up button is pressed
Flashing 69 – Bridge switch is activated
Flashing 70 – Outer barrier latch switch is activated
Flashing 71 – Ground detect switch is activated
Flashing 72 – Outer barrier up switch is activated
Flashing 73 – Inner roll stop up switch is activated
Flashing 74 – Inner roll stop occupied switch is activated
Flashing 76 – Outboard barrier occupied switch is activated
Flashing 78 – Threshold tape switch "A" is activated
Flashing 79 – Threshold tape switch "B" is activated
Flashing 80 – Position set button is pressed

Maintenance and Lubrication

Lubrication Diagram



See the Maintenance/Lubrication Schedule for recommended applications per number of cycles.

Lubricant	Type	Specified (recommended) Lubricant	Available Amount	Braun Part No.
LO - Light Oil	Light Penetrating Oil (30 weight or equivalent)	LPS2, General Purpose Penetrating Oil	11 oz. Aerosol Can	15807
DE - Door-Ease	Stainless Stick Style (tube)	Door-Ease Stick (tube)	1.68 oz.	15806
LG - Light Grease	Light Grease (Multipurpose)	Lubriplate	14 oz. Can	15805

Maintenance and Lubrication Schedule

Proper maintenance is necessary to ensure safe, troublefree operation. Inspecting the lift for any wear, damage or other abnormal conditions should be a part of all transit agencies's daily service program. Simple inspections can detect potential problems.

The maintenance and lubrication procedures specified in this schedule **must** be performed by a Braun authorized service representative at the scheduled intervals according to the number of cycles.

Braun dual parallel arm lifts are equipped with hardened pins and self-lubricating bushings to decrease wear, provide smooth operation and extend the service life of the lift.

When servicing the lift at the recommended intervals, inspection and lubrication procedures specified in the previous sections should be repeated. **Clean** the components and the surrounding area **before applying lubricants**. LPS2 General Purpose Penetrating Oil is recommended where Light Oil is called out. Use of improper lubricants can attract dirt or other contaminants which could result in wear or damage to the components. Platform components exposed to contaminants when lowered to the ground may require extra attention.

Lift components requiring grease are lubricated during assembly procedures. When these components are replaced, grease must be applied during installation procedures. Specified lubricants are available from The Braun Corporation (part numbers provided above).

All listed inspection, lubrication and maintenance procedures should be repeated at "750 cycle" intervals following the scheduled "4500 Cycles" maintenance. These intervals are a general guideline for scheduling maintenance procedures and will vary according to lift use and conditions. Lifts exposed to severe conditions (weather, environment, contamination, heavy usage, etc.) may require inspection and maintenance procedures to be performed more often than specified.

⚠WARNING

Maintenance and lubrication procedures must be performed as specified by an authorized service technician. Failure to do so may result in serious bodily injury and/or property damage.

Maintenance Indicator: The Lift Ready green LED mounted on top of the pump cover will begin to blink after every 750 cycles. The blinking LED will not affect the functions of the lift, but is a reminder to complete necessary maintenance and lubrication.

Once the lift has been serviced, fully stow the lift. Once stowed, press the UP button on the hand pendant and the Floor Level Set button on the back side of the pump cover until the Lift Ready green LED stops blinking.

Discontinue lift use immediately if maintenance and lubrication procedures are not properly performed, or if there is any sign of wear, damage or improper operation. Contact your sales representative or call The Braun Corporation at 1-800-THE LIFT®. One of our national Product Support representatives will direct you to an authorized service technician who will inspect your lift.

750 Cycles	Outer barrier pivot points (2)	Apply Light Oil - See Lubrication Diagram
	Outer barrier latch pivot point	Apply Light Oil - See Lubrication Diagram
	Outer barrier latch slot	Apply Light Grease to both sides of slot. See Lubrication diagram
	Outer barrier lever bearings (2)	Apply Light Oil - See Lubrication Diagram
	Lift-Tite™ latches (tower pivot points - 2)	Apply Light Oil - See Lubrication Diagram
	Lift-Tite™ latch gas (dampening) spring pivot points (2 springs - 4 points)	Apply Light Oil - See Lubrication Diagram
	Inspect Lift-Tite™ latches and gas springs for wear or damage (bent, deformed or misaligned), positive securement (external snap rings) and proper operation	Resecure, replace damaged parts or otherwise correct as needed. **Note:** Apply Light Grease to Lift-Tite™ latch tower pivot point if replacing latch.
	Inspect outer barrier for proper operation	Correct or replace damaged parts.
	Inspect outer barrier latch for proper operation, positive securement, and detached or missing spring	Correct or replace damaged parts and/or relubricate. See Lubrication Diagram

continued

Maintenance and Lubrication Schedule

750 Cycles	Inspect lift for wear, damage or any abnormal condition	Correct as needed.
	Inspect lift for rattles	Correct as needed.
1500 Cycles	**Perform all procedures listed in previous section also**	
	Upper/lower fold arms (2)	Apply grease (synthetic) to contact areas between upper/lower fold arms. See Lubrication Diagram
	Platform pivot pin bearings (4)	Apply Light Oil - See Lubrication Diagram
	Lower fold arm bearings (8)	Apply Light Oil - See Lubrication Diagram
	Inner roll stop pivot bearings (2)	Apply Light Oil - See Lubrication Diagram
	Inner roll stop lever bearings (2)	Apply Light Oil - See Lubrication Diagram
	Inner roll stop lever slot (2)	Apply Light Oil - See Lubrication Diagram
	Saddle support bearings (8)	Apply Light Oil - See Lubrication Diagram
	Upper fold arm cam followers (4)	Apply Light Oil - See Lubrication Diagram
	Parallel arm pivot pin bearings (16)	Apply Light Oil - See Lubrication Diagram
	Handrail pivot pins (2)	Apply Light Oil - See Lubrication Diagram
	Hydraulic cylinder pivot bushings (8)	Apply Light Oil - See Lubrication Diagram
	Outer barrier lever guide slot	Apply Light Grease to both sides of slot. See Lubrication Diagram
	Inspect Lift-Tite™ latch rollers for wear or damage, positive securement and proper operation (2)	Correct, replace damaged parts and/or relubricate.
	Inspect inner roll stop for: • Wear or damage • Proper operation. Roll stop should just rest on top surface of the threshold plate. • Positive securement (both ends)	Resecure, replace or correct as needed. See Platform Angle Adjustment and Platform Floor Level Adjustment Instructions.
	Inspect handrail components for wear or damage, and for proper operation	Replace damaged parts.
	Inspect microswitches for securement and proper adjustment.	Resecure, replace or adjust as needed. See Microswitch Adjustment Instructions.
	Make sure lift operates smoothly	Realign towers and vertical arms. Lubricate or correct as needed.
	Inspect external snap rings: • Lower fold arm (6) • Lift-Tite™ latch roller (2) • Lift-Tite™ latch gas (dampening) spring (4) • Upper fold arm cam followers (4) • Outer barrier hydraulic cylinder mounting pin (2) • Inner roll stop lever bracket pins (2)	Resecure or replace if needed.
	Inspect inner roll stop lock and torsion spring for wear or damage and for proper operation.	Replace damaged parts. Apply Light Oil to inner roll stop lock pivot point.

continued

Maintenance and Lubrication Schedule

1500 Cycles	Inspect lower fold arm pins (2), axles (2) and bearings (8) for wear or damage and positive securement	Replace damaged parts and resecure as needed. Apply Light Oil.
	Remove pump module cover and inspect: • Hydraulic hoses, fittings and connections for wear or leaks • Harness cables, wires, terminals and connections for securement or damage • Control board, circuit breaker, power switch and lights for securement or damage	Resecure, replace or correct as needed.
4500 Cycles	**Perform all procedures listed in previous section also**	
	Inspect cotter pins on platform pivot pin (2)	Resecure, replace or correct as needed
	Hydraulic Fluid (Pump) - Check level. **Note:** Fluid should be changed if there is visible contamination. Inspect the hydraulic system (cylinder, hoses, fittings, seals, etc.) for leaks if fluid level is low.	Use Braun 32840-QT (Exxon® Univis HVI 26) hydraulic fluid (**do not mix** with Dextron III or other hydraulic fluids). Check fluid level with **platform lowered fully** and **roll stop unfolded fully**. Fill to within 1/2" of the bottom of the 1 1/2" fill tube (neck).
	Inspect cylinders, fittings and hydraulic connections for wear, damage or leaks	Tighten, repair or replace if needed.
	Inspect outer barrier cylinder hose assembly (hose, fasteners, connections, etc.) for wear, damage or leakage	Tighten, repair or replace if needed.
	Inspect parallel arms, bearings and pivot pins for visible wear or damage	Replace if needed.
	Inspect parallel arm pivot pin mounting bolts (8)	Tighten or replace if needed.
	Inspect platform pivot pins, bearings and vertical arms for wear, damage and positive securement	Replace damaged parts and resecure as needed. Apply Light Grease during reassembly procedures.
	Inspect upper/lower fold arms, saddle, saddle support and associated pivot pins and bearings for visible wear or damage	Replace if needed.
	Inspect gas springs (cylinders - 4) for wear or damage, proper operation and positive securement	Tighten, replace or correct as needed
	Inspect saddle bearing (1) and saddle bearing buttons (2)	Apply Door-Ease or replace if needed. See Lubrication Diagram.
	Inspect vertical arm plastic covers	Resecure or replace if needed.
	Inspect power cable	Resecure, repair or replace if needed.
	Mounting	Check to see that the lift is securely anchored to the vehicle and there are no loose bolts, broken welds, or stress fractures.
	Decals and Antiskid	Replace decals if worn, missing or illegible. Replace antiskid if worn or missing.
Consecutive 750 Cycle Intervals	**Repeat all** previously listed inspection, lubrication and maintenance procedures at 750 cycle intervals.	

NOTES

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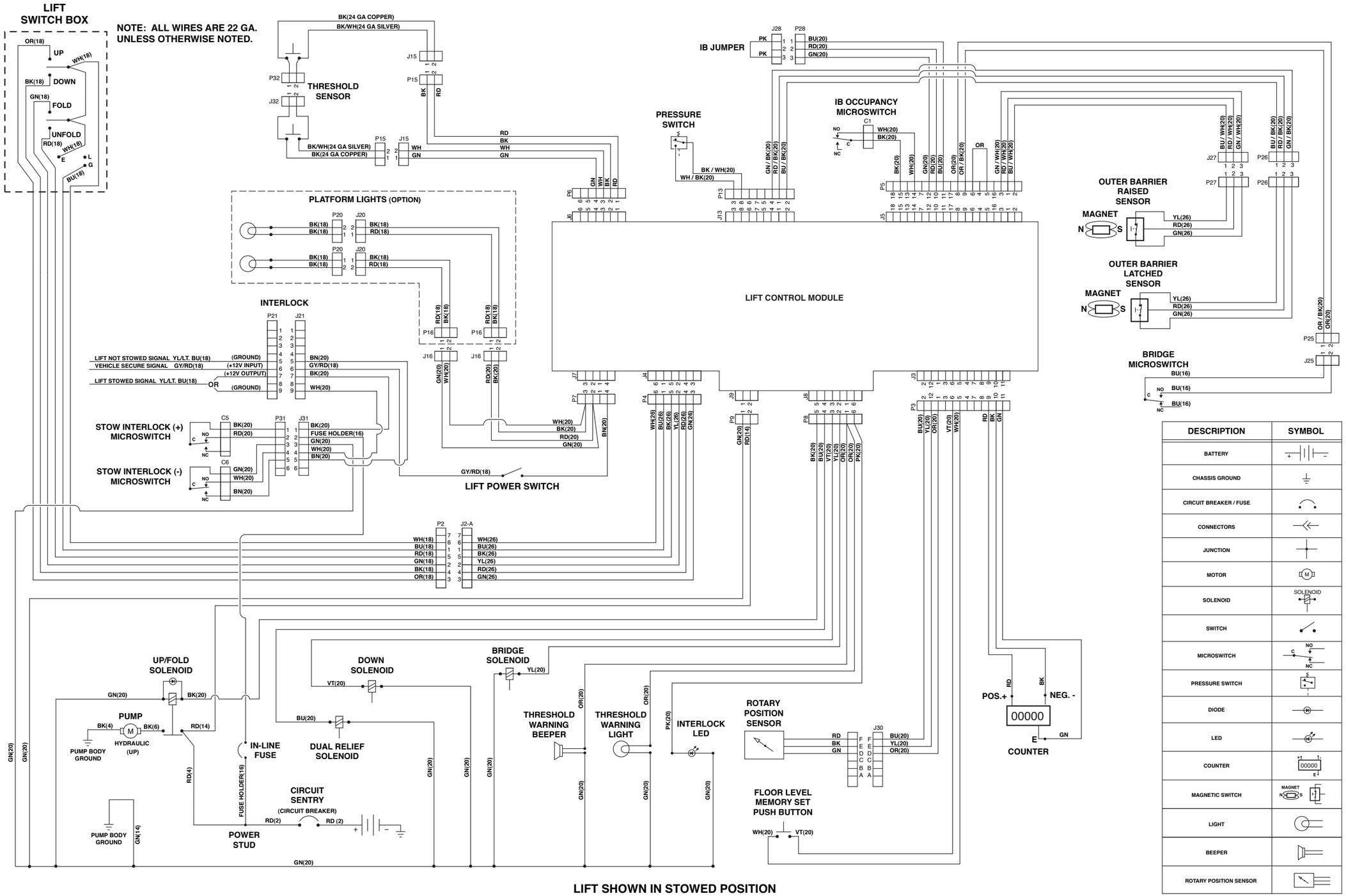
Lift Electrical Schematic



LIFT SHOWN IN STOWED POSITION

DESCRIPTION	SYMBOL
BATTERY	
CHASSIS GROUND	
CIRCUIT BREAKER / FUSE	
CONNECTORS	
JUNCTION	
MOTOR	
SOLENOID	
SWITCH	
MICROSWITCH	
PRESSURE SWITCH	
DIODE	
LED	
COUNTER	
MAGNETIC SWITCH	
LIGHT	
BEEPER	
ROTARY POSITION SENSOR	

Unfold for:
Lift Electrical Schematic

Lift Wiring Diagram

Note: All wires 22 GA. unless otherwise noted.

915-4534NA

Platform Lights (Option)

BK(18) BK(18) P20 J20 BK(20) RD(20) NL9186/FIB NL9187/FIB NL9188/FIB (310033A96)

BK(18) BK(18) P20 J20 BK(20) RD(20) 310033A54

NL9196/FIB NL9197/FIB NL9198/FIB (310034A99)

9-COND WIRE CODE	
NO.	COLOR
1	NOT USED
2	NOT USED
3	NOT USED
4	NOT USED
5	LIFT NOT STOWED GROUND SIGNAL
6	GY/RD(18) VEHICLE SECURE +12V INPUT
7	LIFT STOWED +12V OUTPUT
8	NOT USED
9	LIFT STOWED GROUND SIGNAL

9-COND WIRE CODE	
NO.	COLOR
1	NOT USED
2	NOT USED
3	NOT USED
4	NOT USED
5	BROWN(20)
6	GRAY / RED(18)
7	BLACK(20)
8	NOT USED
9	WHITE(20)

Interlock Connection

GY/RD(18) VEHICLE SECURE SIGNAL +12V INPUT
32639A P21 J21
YL/LT. BU(18) LIFT STOWED / NOT STOWED SIGNAL (Located in cavity #5, #7 or #9 - see chart above)
32638A

915-4530RNA

6-COND WIRE CODE	
NO.	COLOR
1	BLACK(20)
2	FUSE HOLDER(16)
3	GREEN(20)
4	WHITE(20)
5	BROWN(20)
6	NOT USED

6-COND WIRE CODE	
NO.	COLOR
1	BLACK(20)
2	RED(20)
3	GREEN(20)
4	WHITE(20)
5	BROWN(20)
6	NOT USED

J31 P31 915-4539NA

BK(20) RD(20) Stow Interlock (+) Microswitch C5
GN(20) WH(20) BN(20) Stow Interlock (-) Microswitch C6

6-COND WIRE CODE	
NO.	COLOR
1	RED
2	BLACK
3	WHITE
4	GREEN
5	NOT USED
6	NOT USED

P16 J16 RD(20) BK(20) RD(20) BK(20) GN(20) WH(20) P16 J16

GY/RD(18) FS5 FS6 Lift Power Switch BN(20)

P9 RD(14) GN(20) P4 P3

8-COND WIRE CODE			
NO.	COLOR	NO.	COLOR
1	RD / BK(20)	5	NOT USED
2	BU / BK(20)	6	NOT USED
3	WH / BK(20)	7	NOT USED
4	GN / BK(20)	8	BK / WH(20)

P6 P13 P5

Lift Control Module

18-COND WIRE CODE			
NO.	COLOR	NO.	COLOR
1	RED / WHITE(20)	10	RED(20)
2	BLUE / WHITE(20)	11	BLUE(20)
3	GREEN / WHITE(20)	12	GREEN(20)
4	NOT USED	13	NOT USED
5	ORANGE JUMPER	14	WHITE(20)
6	ORANGE JUMPER	15	BLACK(20)
7	NOT USED	16	NOT USED
8	ORANGE(20)	17	NOT USED
9	ORANGE / BLACK(20)	18	NOT USED

12-COND WIRE CODE	
NO.	COLOR
1	ORANGE(20)
2	BLUE(20)
3	NOT USED
4	NOT USED
5	WHITE(20)
6	VIOLET(20)
7	NOT USED
8	NOT USED
9	RED(20)
10	BLACK(20)
11	GREEN(20)
12	YELLOW(20)

4-COND WIRE CODE	
NO.	COLOR
1	NOT USED
2	RED(20) & GREEN(20)
3	BLACK(20) & WHITE(20)
4	BROWN(20)

P7 P8

6-COND WIRE CODE	
NO.	COLOR
1	OR(20) & OR(20)
2	YELLOW(20)
3	VIOLET(20)
4	BLUE(20)
5	BLACK(20)
6	PINK(20)

915-4533NA

100245-001

985-4532NA

6-COND WIRE CODE	
NO.	COLOR
A	NOT USED
B	NOT USED
C	NOT USED
D	ORANGE(20)
E	YELLOW(20)
F	BLUE(20)

RD(20) BK(20) FS13 FS14 Counter FS12 GN(20)

BK(20)

OR(20)

Up/Down Switch

Fold/Unfold Switch

Switch Box

32832A

Rotary Position Sensor J30

Floor Level Memory Set Push Button FS20 VT(20) WH(20) FS21

FS1 Beeper FS9

Threshold Warning Light FS8 FS5 OR(20)

GN(20)

YL(20) FS17 FS16 Bridge VT(20)

FS3 GN(20) FS10 Down (Side view of solenoids removed from pump.)

Dual Relief FS2 BU(20) FS11 GN(20)

BK(20)

Up/Fold Solenoid RL2 RL7 RL1 RD(14) RD(4) Pump Module Power Feed 26082A-4

Note polarity of diode. It must be oriented as shown. Detail at left shows two different styles of diode identification.

In-Line Fuse

BK(20)

Connects to Vehicle Battery (+) Positive Post

Lead Wire 13362A RD(2)

Circuit Sentry (Circuit Breaker) Bat. Aux.

RD(2) Lift Power Cable 205-0712-37

BK(20)

Power Stud RL4

Motor Power Feed Wire BK(6)

Ground RL3 GN(14)

Hydraulic Pump Down Dual Relief Bridge 22166A BK(4) Pump Ground

Back Plate

GN(20)

BK(20)

VT(20)

Pressure Switch FS19 FS18 BK / WH(20) WH / BK(20)

917-4535RNA-33 REAR PUMP LIFTS
917-4535FNA-33 FRONT PUMP LIFTS

Interlock LED FS4 FS7 PK(20) GN(20)

IB Occupancy Microswitch C1 BK(20) WH(20)

3-COND WIRE CODE	
NO.	COLOR
1	PINK
2	NOT USED
3	PINK

3-COND WIRE CODE	
NO.	COLOR
1	BLUE(20)
2	RED(20)
3	GREEN(20)

IB Jumper Harness 32929A J28 P28

Bridge Microswitch 31010FA BU(16) BU(16) J25 P25 OR / BK(20) OR(20)

3-COND WIRE CODE	
NO.	COLOR
1	YELLOW(26)
2	RED(26)
3	GREEN(26)

3-COND WIRE CODE	
NO.	COLOR
1	BLUE / WHITE(20)
2	RED / WHITE(20)
3	GREEN / WHITE(20)

Outer Barrier Raised Sensor 32645NA60 P27 J27 J26 P26 Outer Barrier Latched Sensor

3-COND WIRE CODE	
NO.	COLOR
1	YELLOW(26)
2	RED(26)
3	GREEN(26)

3-COND WIRE CODE	
NO.	COLOR
1	BLUE / BLACK(20)
2	RED / BLACK(20)
3	GREEN / BLACK(20)

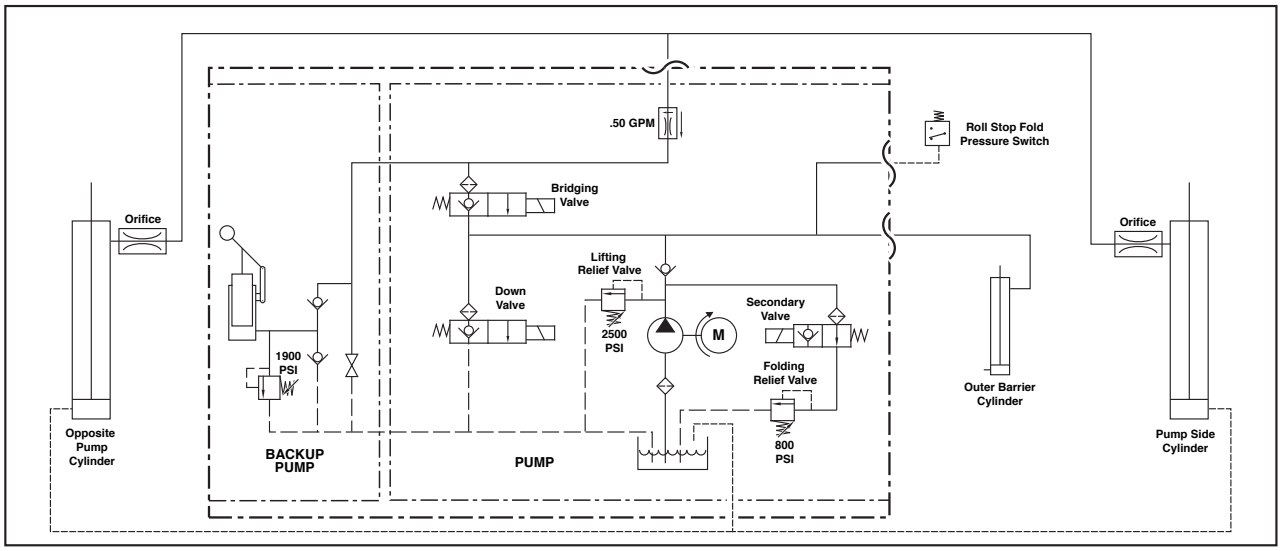
P32 BK(24) COPPER BK / WH(24) SILVER 31221A

J32 BK / WH(24) SILVER BK(24) COPPER 31221A

Threshold Sensors

BK RD WH GN P15 J15 J15 P15 BK(24 GA COPPER) BK / WH(24 GA SILVER) BK / WH(24 GA SILVER) BK(24 GA COPPER)

Hydraulic Schematic



Description	Symbol	Description	Symbol
Fixed Displacement Pump		Hydraulic Port	
Pump Motor		2 Way 2 Position Solenoid Valve	
Backup Pump		Pressure Compensated Flow Control	
Single Acting Cylinder		Relief Valve	
Check Valve		Filter Screen	
Unfold Orifice		Vented Reservoir	
Manual Shutoff Valve		Orifice	
Pressure Switch			

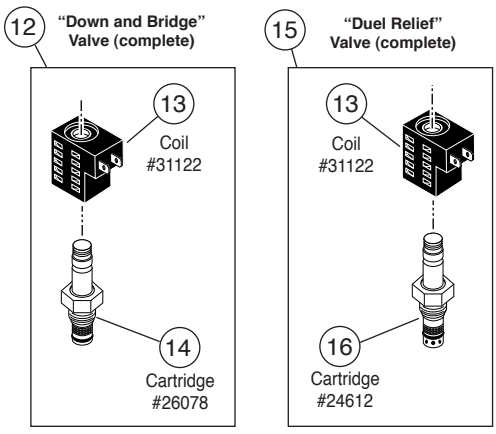
Hydraulics Parts List

Part Numbers of Items Dedicated per Lift Model (Front and Rear Pump Models)							
Item	**Qty.**	**Description**	**NL915**	**NL916**	**NL917**	**NL918**	**NL919**
1	1	Hose Assembly, 1/8" (Opposite Pump Side)	16004A-081	16004A-079	16004A-086	16004A-084	16004A-087
2	1	Hose Assembly, 1/8" (Pump Side)	16004A-046	16004A-046	16004A-046	16004A-046	16004A-046
3	2	Cylinder ✓	C1514.3-9407	C1514.3-9408	C1514.3-9408	C1514.3-9407	C1514.3-9408
4	1	**(Rear Pump)** Hose Assembly, 3/16" w/Two Guards	915-2601-123	915-2601-139	915-2601-139	915-2601-123	915-2601-139
5	1	**(Front Pump)** Hose Assembly, 3/16" w/Two Guards	915-5602-82	915-5602-92.5	915-5602-92.5	915-5602-82	915-5602-92.5
6	1	**(Front Pump)** Hose Assembly, 3/16"	915-5603-80.5	915-5603-83.5	915-5603-86.5	915-5603-83.5	915-5603-86.5

Part Numbers of Items Identical on all Lift Models (Front and Rear Pump Models)			
Item	**Qty.**	**Description**	**Part No.**
7	1	Pump Assembly (M268-0113)12V - with Reservoir/with Backup Pump)	31038-12V
8	1	Solenoid, Up - 4-Post - Trombetta (Flat Mount)	31374
9	1	Power Cable, Up Solenoid to Motor	29049
10	1	Motor, Pump - 12 Volt - Low RPM	31350
11	1	Elbow, 65° - Male 7/16-20 SAE O-Ring to 7/16-20 SAE O-Ring Boss	26578
12	2	Valve Assembly, "Down / Bridge" (complete)	31348K
13	3	Coil (only), "Down / Bridge" Valve - (shown below)	31122
14	2	Cartridge (only), "Down / Bridge" Valve - (shown below)	26078
15	1	Valve Assembly, "Duel Relief" (complete)	31120K
16	1	Cartridge (only), "Duel Relief" Valve - (shown below)	31121
17	1	Cap, Reservoir Filler	16935
18	4	O-Ring (only), Hand Pump Mounting	17351
19	1	Hand Pump (Backup) with O-Rings (Item 18)	26074
20	3	Screw, 1/4-20 x 2-1/4", Allen Head	26080
21	1	Clamp, Reservoir - H-48 (M259)	17069
22	1	Reservoir, Hydraulic Fluid	16934
23	1	Fitting, 90° - 1/8" NPT x 1/8" Barb - Plastic	87563
24	1	Switch, Pressure, 7/16-20 SAE O-Ring Male	31199
25	2	Fitting, Male 7-16-20 SAE O-Ring to Male 7/16-20 JIC 37°	24504
26	1	Elbow, (1) Female 7/16-20 JIC 37 Swivel - (2) Male 7/16-20 JIC 37°	26579
27	2	Elbow, 90°, 7/16-20 SAE O-Ring Male - 7/16-20 JIC 37° Male, Orifice	26667
28	2	Elbow, 90°, 1/4" NPT Male to 1/4" Barbed	15150
29	1	Hose, Thermal Plastic - Black, 1/8" I.D.	23742R*
30	1	Connector, Plastic "Y", 1/8" O.D.	18877
31	1	Fitting, 90° - Male 9/16-18 SAE O-Ring to Male 7/16-20 JIC 37°	87622
32	1	Cylinder, Roll Stop (915-3318NA Contains Items 31,32 &35)	25309NA
33	1	Handle with Grip	17206A
34	1	Diode Assembly, Up Solenoid	73906A
35	1	Breather Vent, 1/4" NPT	26200-2
36	1	Kit, Hydraulic Port Service Cap	27049K

✓ **Seal Kits:** If repairing a cylinder, order Seal Kit #1500-0500**P**.

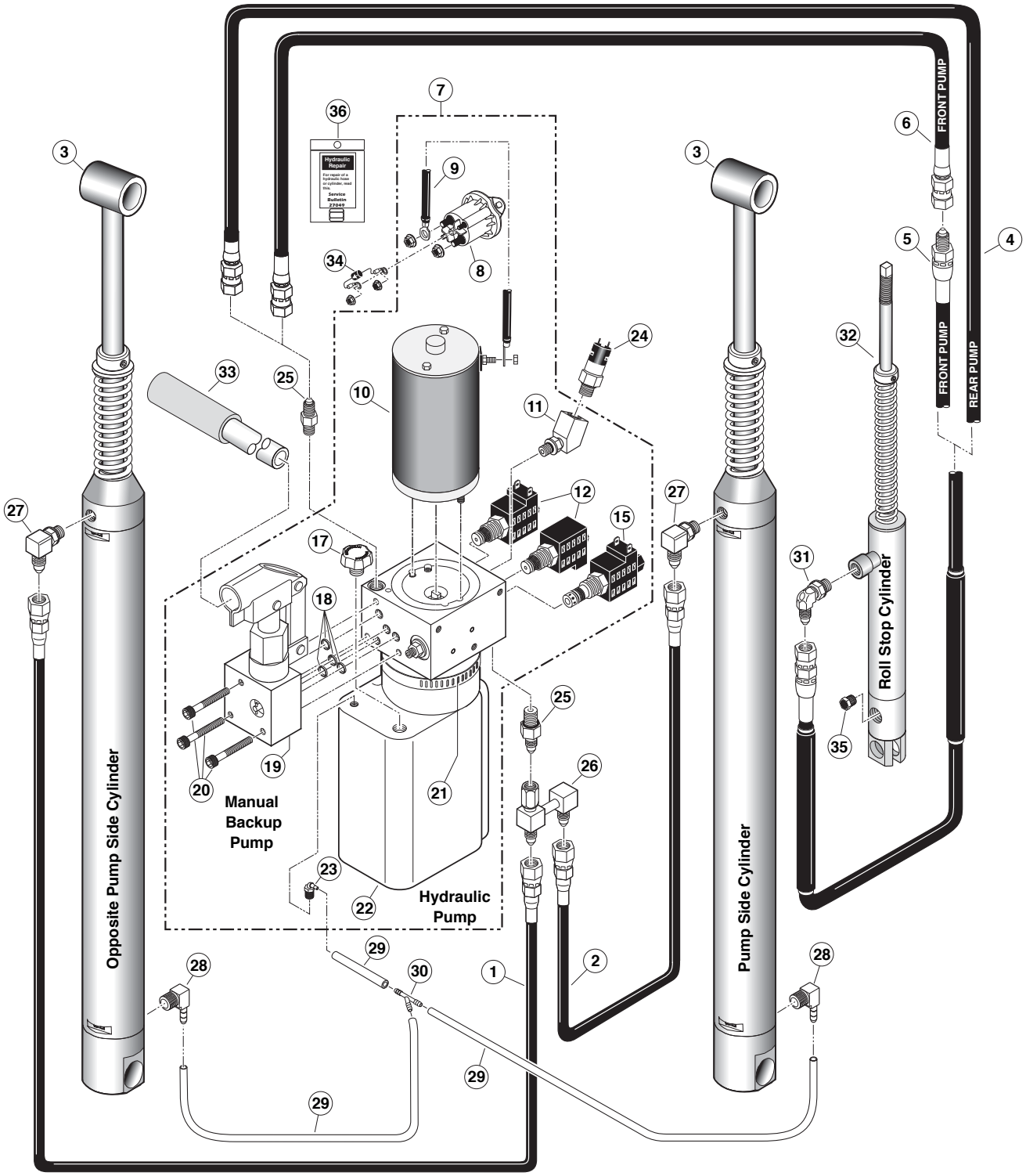
* Raw material items ordered and priced per inch (order specified length).



Hydraulic Fluid

When adding or changing hydraulic fluid, use Braun 32840-QT (Exxon® Univis HVI 26) hydraulic fluid (**do not mix** with Dextron III or other hydraulic fluids).

Hydraulics Diagram



Pump Module Parts List

Part Numbers of Items Dedicated per Lift Model			NL915IB, NL916IB, NL917IB, NL918IB and NL919IB	NL915FIB, NL916FIB, NL917FIB, NL918FIB and NL919FIB
Item	**Qty.**	**Description**		
	1	Pump Module (complete), 12 Volt, Rear	917-5516RNA	917-5516FNA
1	1	Plate, Backing / Mounting - Rear	985-2501RN	985-2501FN
2	1	Cover, Pump, 2-Piece - Back / Bottom (915-0513RNAPT or 915-0513FNAPT Includes Items 2 and 16 - 22)	915-0513RNPT	915-0513FNPT
3	1	Cover, Pump - 2-Piece - Top / Front (915-0519RNAPT or 915-0519FNAPT Includes Items 3 and 39 - 52)	915-0519RNPT	915-0519FNPT
Part Numbers of Items Identical on all Lift Models				
Item	**Qty.**	**Description**		**Part No.**
4	1	Pump Assembly (M268-0113) 12V-120G - Dual Relief / ARS (Includes Items 5 & 6)		31038-12V
5	1	Power Cable, Up Solenoid to Motor		29049
6	1	Solenoid, Up - 4-Post - Trombetta (Flat Mount)		31374
7	1	Diode Assembly, Up Solenoid		73906A
8	2	Nut, #10-32, Serrated Flange		83080
9	2	Fitting, Male 7/16-20 O-Ring to Male 7/16-20 JIC 37°		24504
10	1	Elbow, Female Swivel 7/16-20 JIC 37° to (2) Male 7/16-20 JIC 37°		26579
11	1	Switch, Pressure		31199
12	1	Control, Hand Pendant Assembly (See below for available options)		
12a	-	Control, Hand Pendant Assembly - Non-Shielded Cable - Straight ♦See note below		32832A
12b	-	Control, Hand Pendant Assembly - Shielded Cable - Straight ♦See note below		32833A
12c	-	Control, Hand Pendant Assembly - Shielded Cable - Coiled ♦See note below		32421A
13	1	Control Board Assembly		100159-001
14	8	Standoff, Snap-In		31011
15	1	Switch, Push Button		31753
16	1	Recepticle, Clip On		28803
17	1	Lens, Threshold Warning - Red		30704
18	1	Decal, Warning / Pressure Relief Valve (Not shown)		22249
19	1	Spacer, Lens - NHTSA		31386
20	1	Metal Ring Base - Lamp		30971
21	1	Socket, Lamp		30703
22	3	Screw, #8-32 x 1/2" Pan Head Phillips - Thread Cut		30974
23	1	Bulb, Light		19841
24	1	Diode, Green LED, Panel Mount		29545
25	4	Rivet, Snap - .124" Hole x .197"/.236" Thick		29874
26	2	Washer, 5/16" Flat		10063
27	2	Bolt, 5/16-18 x 3/4", Nylock, Hex * See note below		29608
28	2	Bolt, 5/16-18 x 1/2", Nylock, Hex * See note below		10012
29	1	Cable, Ground		22166A
30	1	Washer, 5/16" External Tooth		16368
31	1	Beeper, Constant - High Output		33251
32	1	Switch, Toggle		31787
33	1	Decal, Lift Power - On/Off (Not shown)		21494
34	1	Stud, Power Feed		26084
35	1	Rubber Boot, Red ♦See note below		82046
36	1	Harness, Lift Interlock Connection		32639A
37	1	Wire Assembly, Lift Stowed Connection ♦See note below		32638A
38	1	Pump Handle with Grip		17206A
39	3	Rivet, Pop, SD43BS - 1/8" - .13"/.19"		12954
40	1	Plug, Window - Clear		30443
41	1	Stud, Wing Head - 1/4 Turn		28804
42	1	Retainer, Push On		28805
43	1	Washer, Nylon, 1/4" I.D. x 11/16" O.D. x .030"		12690
44	1	Clip, Pump Handle - Top		915-5517
45	1	Clip, Pump Handle - Bottom		915-5518
46	1	Decal, Manual Instructions - Public (Not shown)		31412
47	1	Decal, Removal / Installaton - Pump Cover (Not shown)		29051
48	1	Decal, Warning - Control Board Damage - ESD (Not shown)		30787
49	1	Decal, Removal / Installation Pump Handle (Not shown)		29052
50	1	Decal, Installation & Warning - Hydraulic Pressure Switch (Not shown)		27154
51	1	Decal, Dual Relief Adjustment (Not shown)		32201
52	1	Decal, LCD Lift Codes (Not shown)		32410
53	1	Cable, Pump Module Power Hookup (Not shown - see Wiring Diagram)		26082A-4
54	1	Harness, Power - Stow Interlock (Not shown - see Wiring Diagram)		915-4530RNA
55	1	Harness, Interlock / Lighting (Not shown - see Wiring Diagram)		915-4533NA
56	1	Harness, Up / Down Solenoid (Not shown - see Wiring Diagram)		915-2533NA
57	1	Harness, Threshold Switch Extension (Not shown - see Wiring Diagram)		915-4534NA
58	1	Harness, Hand Control - Pump Housing to Circuit Board (Not shown - see Wiring Diagram)		100245-001

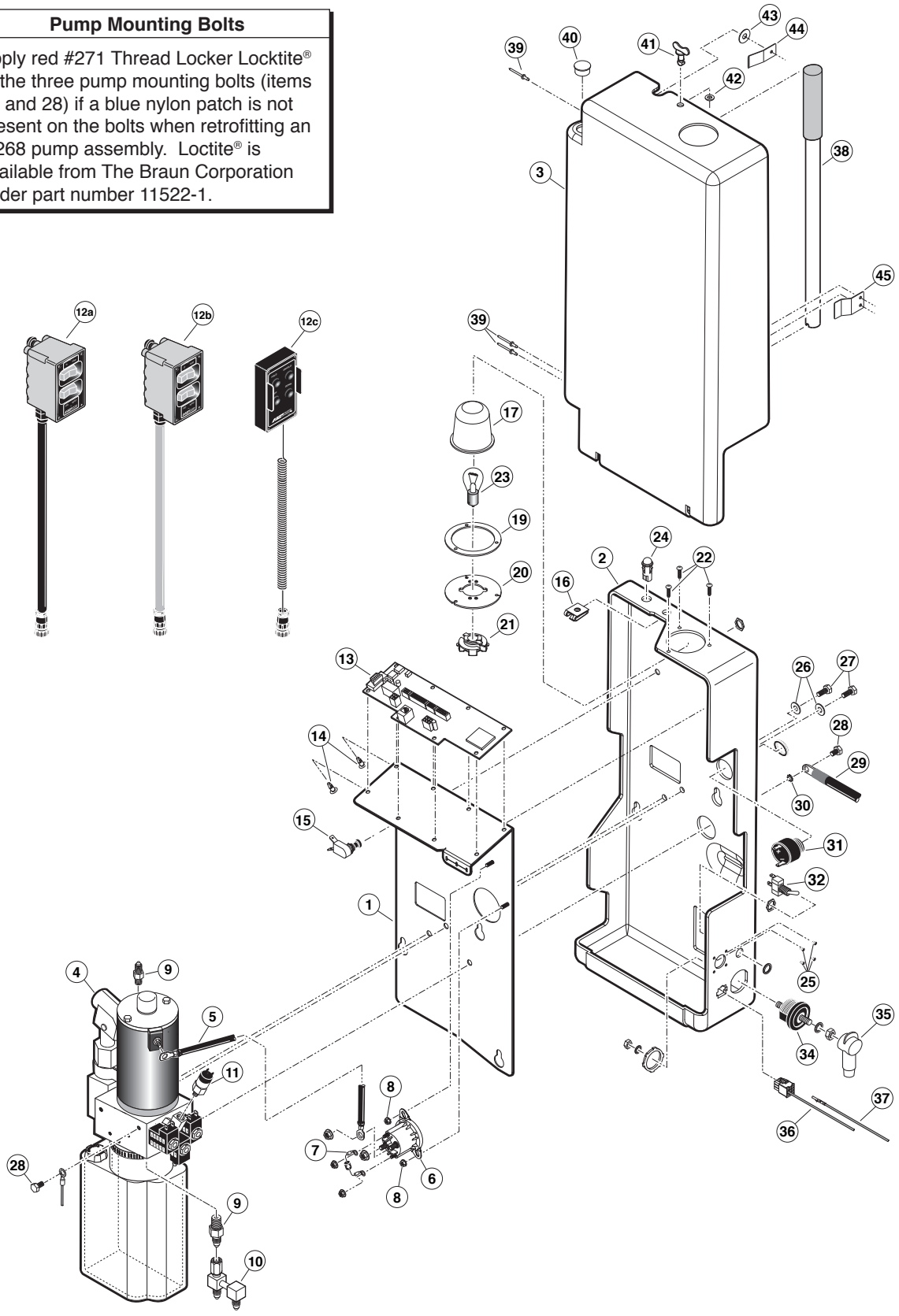
***** Apply red #271 Thread Locker Loctite® to the four hex bolts (items 27 and 28) if a blue nylon patch is not present on the bolts when retrofitting an M268-0113 pump assembly. Loctite® is available from The Braun Corporation under part number 11522-1.

♦ Indicates items available for replacement part purposes **only**. These items **are not** included with replacement pump modules.

Pump Module Diagram

Pump Mounting Bolts

Apply red #271 Thread Locker Locktite® to the three pump mounting bolts (items 27 and 28) if a blue nylon patch is not present on the bolts when retrofitting an M268 pump assembly. Loctite® is available from The Braun Corporation under part number 11522-1.



Note: Rear pump shown, front pump mirror image.

42" Floor-to-Ground Lift Repair Parts List

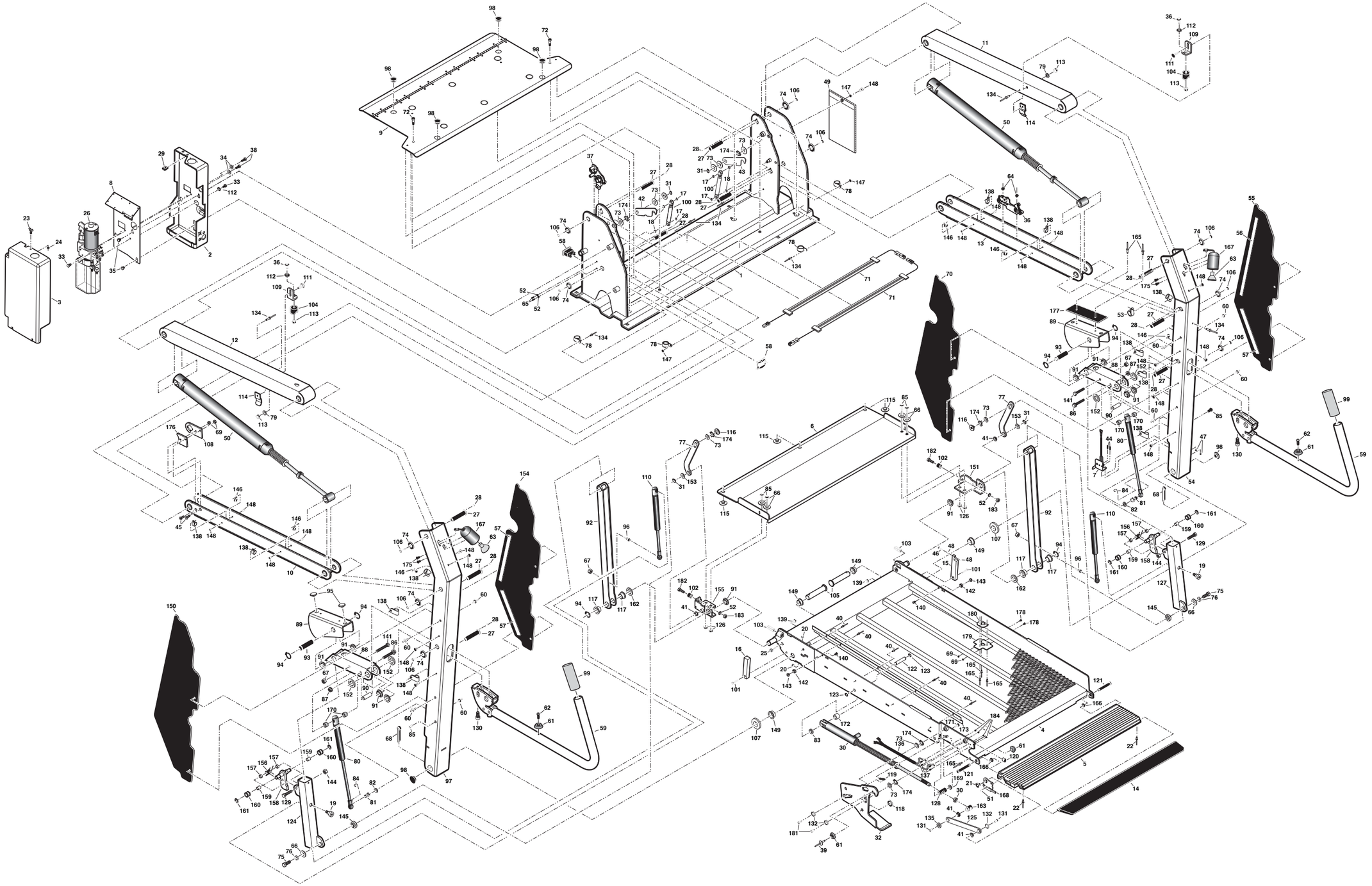
Part Numbers of Items Dedicated per Lift Model

Item	Qty.	Description	NL915IB	NL915FIB	NL918IB	NL918FIB		
1	1	Base Weldment	915R5142NW30	915F5142NW30	918R5142NW33	918F5142NW33		
2	1	Cover, Pump, 2-Piece, Back-Bottom	915-0513RNPT	915-0513FNPT	915-0513RNPT	915-0513FNPT		
3	1	Cover, Pump, 2-Piece, Top-Front Assy.	915-0519RNPT	915-0519FNPT	915-0519RNPT	915-0519FNPT		
4	1	Platform Weldment	917-53050NW	917-53050NW	917-53350NW	917-53350NW		
5	1	Outer Barrier Assembly (inc. 5,14,22,51,168)	915-0312NA30Y	915-0312NA30Y	915R4312A-33Y	915R4312A-33Y		
6	1	Inner Rollstop	918-0147NWY-30	918-0147NWY-30	915-0312NA33Y	915-0312NA33Y		
7	1	Bridge Switch Assembly	31010FA	31010FA	31010FA	31010FA		
8	1	Plate, Backing/Mounting	985-2501RN	985-2501FN	985-2501RN	985-2501FN		
9	1	Base Cover (Traction Tape Not Shown)	915-5142CNA30Y	915-5142CNA30Y	915-5142CNA33Y	915-5142CNA33Y		
10	1	Parallel Arm Assy., Bottom, w/Bearings - Rear	915-4457NA	915-4456NA	915-4457NA	915-4456NA		
11	1	Parallel Arm Assy., Top, w/Bearings - Front	915-0422FA	915-5422FNA	915-0422FA	915-5422FNA		
12	1	Parallel Arm Assy., Top, w/Bearings - Rear	915-5422RNA	915-5422RA	915-5422RNA	915-0422RA		
13	1	Parallel Arm Assy., Bottom, w/Bearings - Front	915-4458NA	915-4455NA	915-4458NA	915-4455NA		
14	1	Rubber Nose	24603-30	24603-30	24603-33	24603-33		

Part Numbers of Items Identical on All Lift Models

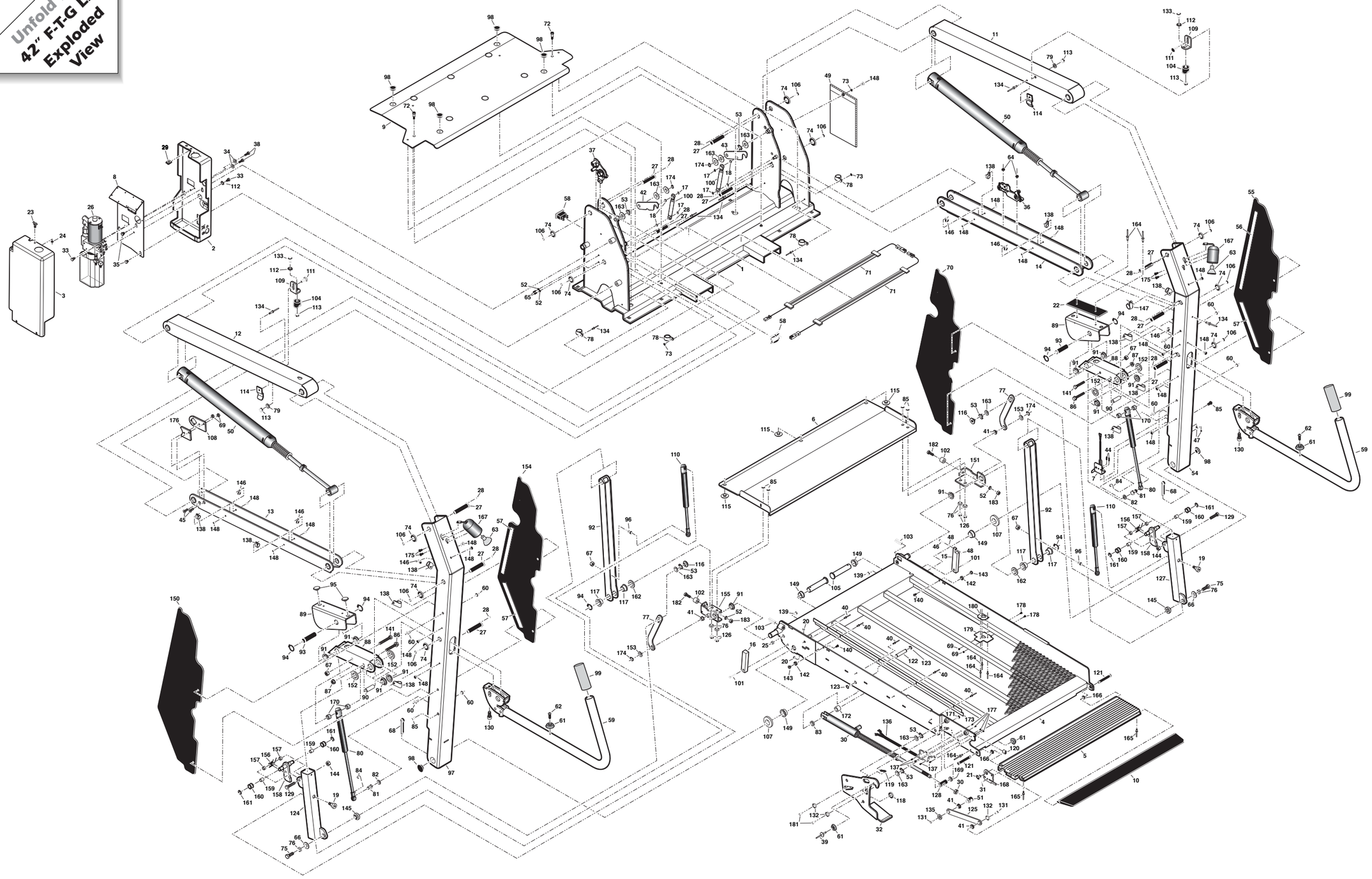
Item	Qty.	Description	Part No.
15	1	Block, Platform Stop	25778
16	1	Block, Platform Stop	900-0311
17	4	Snap-Ring 5/16"	24570
18	4	O-Ring, 5/16" I.D. x 1/16" O.D.	26614
19	2	Screw, Socket Head, 3/8-16 x 1/2" with 1/2" Shoulder	25929
20	2	Grommet, I.D. .281"/ FR.125" x GD.625"/T.375"	27725
21	1	Pivot, Outer Barrier Lever	24550
22	2	Rivet, Pop, 3/16" x .06"/.13"	11512
23	1	Stud, Wing Head	28804
24	1	Retainer, Push-On	28805
25	1	Grommet, ID .312", FR .250", GD .813" T500"	27726
26	1	Pump Assembly	31038-12V
27	10	Pin, Pivot, Parallel Arm	917-0403
28	10	Screw Drive #8 x 3/16" Long Black	31086BK
29	1	Receptacle, Clip-On	28803
30	1	Cylinder Assy., Outer Barrier	915-3318NA
31	4	Snap-Ring 1/2"	13273
32	1	Latch, Outer Barrier Assy., w/Magnet	915-4343NA
33	2	Bolt, 5/16-18 x 1/2" Nylock, Hex	10012
34	2	Washer, 5/16" Flat	10063
35	2	Bolt, 3/8-16 x 1/2" Nylock, Hex	29729
36	1	Assembly, IB Occupied	32642A
37	1	Assembly, Rotary Position Sensor	31094A
38	2	Bolt, 5/16-18 x 3/4" Nylock, Hex	29608
39	1	Rivet, Pop, SD68 BSLF-3/16" - .38"/.50"	15244
40	5	Rivet, Pop, 1/8"- .25"/.31"	13906
41	4	Bearing, Flange, 1/2" x 1/4"	24442
42	1	Weldment, Latch, Lift/Tite, Rear	27013RW
43	1	Weldment, Latch, Lift/Tite, Front	27013FW
44	2	Screw, #4-40 x 5/8", Round Head	14810
45	2	Screw, 1/4-20 x 3/4", Flat Head, Countersink	28986
46	1	Screw, #8-32 x 1", Mach. Truss Head	19912BK
47	2	Nut, #4-40 w/Lockwasher	19537
48	2	Nut, #8-32, Hex	10777
49	1	Bag, Vinyl - 7" x 10"	31174
50	2	Cylinder, 14.625"/29.146" Retracted	C1514.3-9408
51	1	Screw, 10-32 x 5/8" Pan Head Phillips, Thd. Cut	26714
52	4	Washer, 1/4" External Tooth	83588
53	1	Clamp, 5/8" Closed Insulated	84070
54	1	Vertical Channel Weldment, Front, 42"	918-0442FNW
55	1	Cover, Plastic, Parallel Arm, O/S Front-w/Tape	915-0704NA
56	2	Tape, 1" Wide S-Face Foam, x 14" (1 Shown)	82015R014
57	6	Tape, 1" Wide S-Face Foam, x 10" (3 Shown)	82015R010
58	1	Cycle Counter-LCD Without Reset	30547
59	2	Handrail Weldment	985-4618NW
60	8	Rivet, Push In - 8MM	30063
61	4	Bumper, Rubber, 31/32" O.D.	10950
62	2	Screw, #8-18 x 1/2", Self-Tap, Phillips	13583
63	2	Bulb, Light 20-W, Halogen Reflector	31060
64	2	Nut, #10-32 w/Lockwasher	18349
65	2	Screw, 1/4-20 x 3/4", Button Head, Socket Cap	81068-000
66	6	Washer, 3/8" Flat, Black	10064
67	4	Nut, 3/8-16, Hex Lock	13617
68	2	Cotter Pin, 1/4" x 2", Black	15886BK
69	4	Nut, 1/4-20 Hex Lock	10775
70	1	Cover, Plastic, Parallel Arm, I/S Front-w/Tape	975-0701NA
71	2	Threshold Strip Switch	31221A
72	2	Bolt, Shoulder, 5/16" x 5/8"-1/4-20	31816
73	10	Washer, .516" I.D. x 1" O.D. x .0269", Auto BK	15328
74	10	Washer, 1/2" Flat Black Zinc	25346
75	2	Bolt, 3/8-16 x 1", Hex	10025
76	2	Washer, 3/8", Lock, Black	10069BK
77	2	Lever, Inner Rollstop	985-0404N
78	4	Clamp, Insulate, 1 3/8" I.D.	29765
79	2	Washer, 5/16" Lock, Black	10068
80	2	Gas Spring, Fold Arm	29186
81	2	Ball Stud, Gas Spring, 13MM x 3/8-16 F. Thread	29185
82	2	Washer, 3/8", Lock	10069
83	1	Spacer, Flap Cylinder .184" Thick	915-0416
84	2	Clip, Safety, 3/8-16 x 3/4", Flange	12608
85	6	Bolt, 3/8-16 X 3/4", Flange Button Head, Socket Cap	25171
86	2	Bolt, 5/16-18 x 2", Flange, Hex	25130
87	2	Nut, 5/16-18, Serrated Flange	25131
88	2	Arm, Slide Support (Replace In Pairs)	985-6612N
89	2	Slide, Platform, Rotate, Weldment	915-0606N
90	2	Spacer, .5" O.D. x .334" I.D. x 1.515" LG	25132
91	10	Bearing, Flange, 3/4" x 1/4"	24012
92	2	Weldment, Platform Pivot Arm - 42" (Replace In Pairs)	918-2640NW-BKN
93	2	Pin, Pivot, Lower Arm	900-0413N
94	6	Ring, Snap, 3/4", External	18657
95	2	Bearing, UHMW, Flat, 1.226"	205-1760
96	2	Ball Stud, 10MM	21301
97	1	Vertical Channel Weldment, Rear, 42"	918-0442RNW
98	6	Plastic End Cap, 1" I.D. x 1 1/4" O.D.	20474
99	2	Grip, Handle, Yellow	19074
100	2	Spring, Dampener, Retract	26963
101	2	Bolt, 5/16-18 x 1 1/4" Low Socket Hd., Cap, Bk.	26327
102	2	Bumper, 1" x 1/2" Long	33654
103	2	Screw, 1/2-20 x 1 1/2" Set Lock, Black	18663
104	2	Block, Guide-Platform Stow	28593
105	2	Pin, Platform	975-2325
106	10	Screw, 5/16-18 x 3/4", SHFS	25527
107	2	Spacer, UHMW, Vertical Channel	995-0320
108	1	Position Sensor Collet	31093
109	2	Bracket, Mounting, Quiet Ride	915-0392
110	2	Gas Spring, 12.2" Extended/8.3" Compressed	30550A
111	2	Bolt, 5/16-18 x 3/4", Carriage, Black	15858BK
112	3	Washer, 5/16", External Tooth	16368
113	4	Nut, 5/16-18 Hex	10058
114	2	Bracket, Inner Side Panel Guide	915-0703
115	3	Bearing, UHMW, Flat, Thin, Black	916-5406
116	2	Pivot, Inner Rollstop Lever, Upper, Inside	916-5433
117	4	Bearing, Flange - 3/4" x 1/2"	24027
118	1	Spacer, UHMW, Latch	950-7760
119	1	Spring, 1/4" x 1" Extension w/Hooks	10774
120	1	Tubing, Polyurethane - 1/4" I.D. x 1/2" O.D. x .81"	28630R000.81
121	2	Pin, Clevis, 3/8" x 3", Black	24932BK
122	1	Pin, Platform Cylinder	915-0414
123	2	Ring, Snap, 1/2", External, .035" Thick	20946
124	1	Weldment, Tube-IB Fold Arm-Front	918-0625RNW
125	1	Lever, Outer Barrier Latch (Assembly #915-0345A)	915-0345
126	4	Nut, 3/8-16, Hex Lock Jamb	20926
127	1	Weldment,Tube-IB Fold Arm-Rear	918-0625FNA
128	1	Pivot, Outer Barrier Cylinder, Front	990-0352
129	2	Bolt, 5/16-18 x 1 1/2" Hex Head, Cap	10014
130	2	Bolt, 7/16-20 x 1", SHCS, w/Nylock Patch	28474
131	2	Screw, #10-32 x 3/8", Flat Head, Hex	24537
132	3	Adapter, Cylinder/Outer Barrier Lever-Out	990-0341
133	2	Bolt, 5/16-18 x 3/4", Button Head, Soc Cap Hd	24440
134	7	Rivet, Pop, 3/16"-.25"/.38", Black	14993
135	1	Adapter, Cylinder/Outer Barrier Lever	915-0341N
136	1	Harness, Sensor - Cherry w/Plug	32645NA60
137	4	Screw, #4-40 x 1/4" Phillips Head	11480
138	11	Clip, Cable, 1/2", Plastic	10092
139	2	Nut, 5/16-18, Top Lock, Black	28324BK
140	2	Bolt, 1/4-20 x 1/2", Button Head Socket	15733
141	2	Bolt, 3/8-16 x 2", Hex Head, Cap	10027
142	2	Roller Assembly	1000-2395A
143	2	Roller Retainer	915-5353
144	2	Nut, 5/16-18 Hex, Lock	11387BK
145	2	Pivot, Inner Rollstop Lever, Upper-Outer	916-5434
146	6	Clamp, 1/4" I.D.- Nylon Loop	84396
147	3	Washer, #10, Flat, Auto BK	11541
148	18	Rivet, Snap, .201" x .256"/.295"	26362
149	4	Bearing, Flange, 1" x 1/2-16 FDU08	28031
150	1	Cover, Plastic, Parallel Arm, O/S Rear-w/Tape	915-0702NA
151	1	Weldment, Inner Rollstop Bracket, Front	985-0431FNW
152	4	Spacer, Handrail, .375" Thk. UHMW	995-0301
153	2	Washer, .516" I.D. x .75" O.D. x .250", Black	25336
154	1	Cover, Plastic, Parallel Arm, I/S Rear-w/Tape	975-0703NA
155	1	Weldment, Inner Rollstop Bracket, Rear	985-0431RNW
156	2	Spring, Torsion - .366 I.D. x .05"	30386
157	4	Spacer, IB Lock	30394
158	2	Weldment, IB Lock	985-0630NW
159	4	Bearing, 3/8" I.D. x 1/2" Long	30405
160	4	Roller, .65" O.D. x 1/2" Long	985-0631N
161	4	E-Clip, 3/8" Shaft	84383
162	2	Spacer, Handrail, .230" Thk. UHMW	911-5301
163	1	Adapter, Cylinder/Outer Barrier Lever	915-0344
164	1	Harness, Sensor - Magnetic w/Plug - 15"	30433A15
165	6	Rivet, Pop, 3/16" - .13/.25" - SD64BS	11513
166	2	Bearing, Flange, 3/8" x 1/4" - Plastic	24028
167	2	Light Assy, Vertical Channel	31062A
168	1	Tab, Outer Barrier, Flap Cylinder	915-6367NA
169	1	Washer, .4" I.D. x .810" O.D. x .12"	24536
170	4	Spacer, UHMW-.75" O.D. x .39" I.D. x .25"	30227
171	1	Bolt, 3/8-16 x 3/4" Soc. Hd. Cap Screw Bk.	26259
172	1	Spacer, Flap Cylinder .700" Thick	915-0415
173	1	Guard, Outer Barrier Sensor Wires	915-0368N50Y
174	6	Washer, Finger, Disc Spring	27276
175	4	Screw, #10-32 x 1/2" Button Head, Socket, Cap	30375WP
176	1	Position Sensor Spacer	31092
177	1	Slide, UHMW, Platform Rotate	31677
178	2	Bolt, Carriage, 1/4-20 x 1/2"	12777
179	1	Bracket, Hanger, Hand Pendant	33215
180	1	Shim, Bracket, Hanger, Hand Pendant	33216
181	2	Screw, #10-32 x 1/2" FHDHXS, Black w/Patch	17192P
182	2	Bolt, 1/4-20 x 1", Hex	10001
183	2	Nut, 1/4-20, Hex	10057
184	4	Weld Nut, #4-40 x 1/8" Barrel	32949

42″ Floor-to-Ground Lift Exploded View



Unfold for:
42″ F-T-G Lift
Exploded
View

48″ Floor-to-Ground Lift Exploded View



48″ Floor-to-Ground Lift Repair Parts List

Part Numbers of Items Dedicated per Lift Model

Item	Qty.	Description	NL916IB	NL916FIB	NL917IB	NL917FIB	NL919IB	NL919FIB
1	1	Base Weldment	985R5148NW30	985F5148NW30	985R5148NW33	985F5148NW33	985R5148NW34	985F5148NW34
2	1	Cover, Pump, 2-Piece, Back-Bottom	915-0513RNPT	915-0513FNPT	915-0513RNPT	915-0513FNPT	915-0513RNPT	915-0513FNPT
3	1	Cover, Pump, 2-Piece, Top-Front	915-0519RNPT	915-0519FNPT	915-0519RNPT	915-0519FNPT	915-0519RNPT	915-0519FNPT
4	1	Platform Weldment	917-53050NW	917-53050NW	917-53350NW	917-53350NW	919-53450NW	919-53450NW
5	1	Outer Barrier Assembly (Inc. 5,10,31,165,168)	915-0312NA30Y	915-0312NA30Y	915-0312NA33Y	915-0312NA33Y	915-0312NA34Y	915-0312NA34Y
6	1	Inner Rollstop	915-0147NW30Y	915-0147NW30Y	915-0147NWY	915-0147NWY	915-0147NW34Y	915-0147NW34Y
7	1	Bridge Switch Assembly	31010FA	31010FA	31010FA	31010FA	31010FA	31010FA
8	1	Plate, Backing/Mounting	985-2501RN	985-2501FN	985-2501RN	985-2501FN	985-2501RN	985-2501FN
9	1	Base Cover Assy., (Traction Tape Not Shown)	975-5148CNA30Y	975-5148CNA30Y	975-5148CNA33Y	975-5148CNA33Y	975-5148CNA34Y	975-5148CNA34Y
10	1	Rubber Nose	24603-30	24603-30	24603-33	24603-33	24603-34	24603-34
11	1	Parallel Arm Assy.,Top-Front w/Bearings	915-0437FA	985-5437FNA	915-0437FA	985-5437FNA	915-0437FA	985-5437FNA
12	1	Parallel Arm Assy.,Top Rear w/Bearings	917-5437RNA	917-0436RNA	917-5437RNA	917-0436RNA	917-5437RNA	917-0436RNA
13	1	Parallel Arm Assy., Bottom Rear w/Bearings	917-4458RNA	917-4457NA	917-4458RNA	917-4457NA	917-4458NA	917-4457NA
14	1	Parallel Arm Assy., Bottom Front w/Bearings	917-4458FNA	975-4458NA	917-4458FNA	975-4458NA	917-4458FNA	975-4458NA

Part Numbers of Items Identical on All Lift Models

Item	Qty.	Description	Part No.
15	1	Block, Platform Stop - Bridging - Rear	25778
16	1	Block, Platform Stop - Bridging - Front	900-0311
17	4	Snap-Ring 5/16"	24570
18	4	O-Ring, 5/16" I.D. x 1/16" O.D.	26614
19	2	Screw, Socket Head, 3/8-16 x 1/2" with 1/2" Shoulder	25929
20	2	Grommet, I.D. .281"/ FR.125" x GD.625"/T.375"	27725
21	1	Pivot, Outer Barrier Lever	24550
22	1	Slide, UHMW, Platform Rotate	31677
23	1	Stud, Wing Head	28804
24	1	Retainer, Push-On	28805
25	1	Grommet, ID .312", FR .250", GD .813" T500"	27726
26	1	Pump Assembly	31038-12V
27	10	Pin, Pivot, Parallel Arm	917-0403
28	10	Screw Drive #8 x 3/16" Long Black	31086BK
29	1	Receptacle, Clip-On	28803
30	1	Cylinder Assy., Outer Barrier	915-3318NA
31	1	Screw, 10-32 x 5/8" Pan Head Phillips, Thd. Cut	26714
32	1	Latch, Outer Barrier Assy., w/Magnet	915-4343NA
33	2	Bolt, 5/16-18 x 1/2" Nylock, Hex	10012
34	2	Washer, 5/16" Flat	10063
35	2	Bolt, 3/8-16 x 1/2" Nylock, Hex	29729
36	1	Assembly, IB Occupied	32642A
37	1	Assembly, Rotary Position Sensor	31094A
38	2	Bolt, 5/16-18 x 3/4" Nylock, Hex	29608
39	1	Rivet, Pop, SD68 BSLF-3/16" - .38"/.50"	15244
40	5	Rivet, Pop, 1/8"- .25"/.31"	13906
41	4	Bearing, Flange, 1/2" x 1/4"	24442
42	1	Weldment, Latch, Lift/Tite, Rear	27013RW
43	1	Weldment, Latch, Lift/Tite, Front	27013FW
44	2	Screw, #4-40 x 5/8", Round Head	14810
45	2	Screw, 1/4-20 x 3/4", Flat Head, Countersink	28986
46	1	Screw, #8-32 x 1", Mach. Truss Head	19912BK
47	2	Nut, #4-40 w/Lockwasher	19537
48	2	Nut, #8-32, Hex	10777
49	1	Bag, Vinyl - 7" x 10"	31174
50	2	Cylinder, 14.625"/29.146" Retracted	C1514.3-9408
51	1	Adapter, Cylinder/Outer Barrier Lever	915-0344
52	4	Washer, External Tooth	83588
53	6	Washer, Finger, Disc Spring	27276
54	1	Vertical Channel Weldment, Front, 48"	955-0448FNW
55	1	Cover, Plastic, Parallel Arm, O/S Front-w/Tape	915-0704NA
56	2	Tape, 1" Wide S-Face Foam, x 14" (1 Shown)	82015R014
57	6	Tape, 1" Wide S-Face Foam, x 10" (3 Shown)	82015R010
58	1	Cycle Counter-LCD Without Reset	30547
59	2	Handrail Weldment	985-4618NW
60	8	Rivet, Push In - 8MM	30063
61	4	Bumper, Rubber, 31/32" O.D.	10950
62	2	Screw, #8-18 x 1/2", Self-Tap, Phillips	13583
63	2	Bulb, Light 20-W, Halogen Reflector	31060
64	2	Nut, #10-32 w/Lockwasher	18349
65	2	Screw, 1/4-20 x 3/4", Button Head, Socket Cap	81068-000
66	2	Washer, 3/8" Flat, Black	10064
67	4	Nut, 3/8-16, Hex Lock	13617
68	2	Cotter Pin, 1/4" x 2", Black	15886BK
69	4	Nut, 1/4-20 Hex Lock	10775
70	1	Cover, Plastic, Parallel Arm, I/S Front-w/Tape	975-0701NA
71	2	Threshold Strip Switch	31221A
72	2	Bolt, Shoulder, 5/16 x 5/8-1/4"-20	31816
73	3	Washer, #10, Flat, Auto BK	11541
74	10	Washer, 1/2" Flat Black Zinc	25346
75	2	Bolt, 3/8-16 x 1", Hex	10025
76	6	Washer, 3/8", Lock, Black	10069BK
77	2	Lever, Inner Rollstop	985-0404N
78	4	Clamp, Insulate, 1 3/8" I.D.	29765
79	2	Washer, 5/16" Lock, Black	10068
80	2	Gas Spring, Fold Arm	29186
81	2	Ball Stud, Gas Spring, 13MM x 3/8-16 F. Thread	29185
82	2	Washer, 3/8", Lock	10069
83	1	Spacer, Flap Cylinder .184" Thick	915-0416
84	2	Clip, Safety, 3/8-16 x 3/4", Flange	12608
85	6	Bolt, 3/8-16 X 3/4", Flange Button Head, Socket Cap	25171
86	2	Bolt, 5/16-18 x 2", Flange, Hex	25130
87	2	Nut, 5/16-18, Serrated Flange	25131
88	2	Arm, Slide Support (Replace In Pairs)	985-6612N
89	2	Slide, Platform, Rotate	985-0606N
90	2	Spacer, .5" O.D. x .334" I.D. x 1.515" LG	25132
91	10	Bearing, Flange, 3/4" x 1/4"	24012
92	2	Weldment, Platform Pivot Arm - 48"	985-0640NW-BKN
93	2	Pin, Pivot, Lower Arm	900-0413N
94	6	Ring, Snap, 3/4", External	18657
95	2	Bearing, UHMW, Flat, 1.226"	205-1760
96	2	Ball Stud, 10MM	21301
97	1	Vertical Channel Weldment, Rear, 48"	955-0448RNW
98	6	Plastic End Cap, 1" I.D. x 1 1/4" O.D.	20474
99	2	Grip, Handle, Yellow	19074
100	2	Spring, Dampener, Retract	26963
101	2	Bolt, 5/16-18 x 1 1/4" Low Socket Hd., Cap, Bk.	26327
102	2	Bumper, 1" x 5/8" Long	33603
103	2	Screw, 1/2-20 x 1 1/2" Set Lock, Black	18663
104	2	Block, Guide-Platform Stow	28593
105	2	Pin, Platform	975-2325
106	10	Screw, 5/16-18 x 3/4", SHFS	25527
107	2	Spacer, UHMW, Vertical Channel	995-0320
108	1	Position Sensor Collet	31093
109	2	Bracket, Mounting, Quiet Ride	915-0392
110	2	Gas Spring, 12.2" Extended/8.3" Compressed	30550A
111	2	Bolt, 5/16-18 x 3/4", Carriage, Black	15858BK
112	3	Washer, 5/16", External Tooth	16368
113	4	Nut, 5/16-18 Hex	10058
114	2	Bracket, Inner Side Panel Guide	915-0703
115	3	Bearing, UHMW, Flat, Thin, Black	916-5406
116	2	Pivot, Inner Rollstop Lever, Upper, Inside	916-5433
117	4	Bearing, Flange - 3/4" x 1/2"	24027
118	1	Spacer, UHMW, Latch	950-7760
119	1	Spring, 1/4" x 1" Extension w/Hooks	10774
120	1	Tubing, Polyurethane - 1/4" I.D. x 1/2" O.D. x .81"	28630R000.81
121	2	Pin, Clevis, 3/8" x 3", Black	24932BK
122	1	Pin, Platform Cylinder	915-0414
123	2	Ring, Snap, 1/2", External, .035" Thick	20946
124	1	Weldment, Tube-IB Fold Arm-Rear	985-0625RNW
125	1	Lever, Outer Barrier Latch (Assembly #915-0345A)	915-0345
126	4	Nut, 3/8-16, Hex	10059BK
127	1	Weldment,Tube-IB Fold Arm-Front	985-0625FNW
128	1	Pivot, Outer Barrier Cylinder, Front	990-0352
129	2	Bolt, 5/16-18 x 1 1/2" Hex Head, Cap	10014
130	2	Bolt, 7/16-20 x 1", SHCS, w/Nylock Patch	28474
131	2	Screw, #10-32 x 3/8", Flat Head, Hex	24537
132	3	Adapter, Cylinder/Outer Barrier Lever-Out	990-0341
133	2	Bolt, 5/16-18 x 3/4", Button Head, Soc Cap Hd	24440
134	6	Rivet, Pop, 3/16"-.25"/.38", Black	14993
135	1	Adapter, Cylinder/Outer Barrier Lever	915-0341N
136	1	Harness, Sensor - Cherry w/Plug	32645NA60
137	4	Screw, #4-40 x 1/4" Phillips Head	11480
138	11	Clamp, Cable, 1/2", Plastic	10092
139	2	Nut, 5/16-18, Top Lock, Black	28324BK
140	2	Bolt, 1/4-20 x 1/2", Button Head Socket	15733
141	2	Bolt, 3/8-16 x 2", Hex Head, Cap	10027
142	2	Roller Assembly	1000-2395A
143	2	Roller Retainer	915-5353
144	2	Nut, 5/16-18 Hex, Lock	11387BK
145	2	Pivot, Inner Rollstop Lever, Upper-Outer	916-5434
146	6	Clamp, 1/4" I.D.- Nylon Loop	84396
147	1	Clamp, 5/8" Closed Insulated	84070
148	18	Rivet, Snap, .201" x .256"/.295"	26362
149	4	Bearing, Flange, 1" x 1/2-16FDU08	28031
150	1	Cover, Plastic, Parallel Arm, O/S Rear-w/Tape	915-0702NA
151	1	Weldment, Inner Rollstop Bracket, Front	985-0431FNW
152	4	Spacer, Handrail, .375" Thk. UHMW	995-0301
153	2	Washer, .516" I.D. x .75" O.D. x .250", Black	25336
154	1	Cover, Plastic, Parallel Arm, I/S Rear-w/Tape	975-0703NA
155	1	Weldment, Inner Rollstop Bracket, Rear	985-0431RNW
156	2	Spring, Torsion - .366 I.D. x .05"	30386
157	4	Spacer, IB Lock	30394
158	2	Weldment, IB Lock	985-0630NW
159	4	Bearing, 3/8" I.D. x 1/2" Long	30405
160	4	Roller, .65" O.D. x 1/2" Long	985-0631N
161	4	E-Clip, 3/8" Shaft	84383
162	2	Spacer, Handrail, .230" Thk. UHMW	911-5301
163	10	Washer, .516" I.D. x 1"/O.D. x .269", Auto BK	15328
164	6	Rivet, Pop, 3/16" - .13/.25" - SD64BS	11513
165	2	Rivet, Pop, 3/16" x .06"/.13	11512
166	2	Bearing, Flange, 3/8" x 1/4" - Plastic	24028
167	2	Light Assy, Vertical Channel	31062A
168	1	Tab, Outer Barrier, Flap Cylinder w/Magnet	915-6367NA
169	1	Washer, .4" I.D. x .810" O.D. x .12"	24536
170	4	Spacer, UHMW-.75" O.D. x .39" I.D. x .25"	30227
171	1	Bolt, 3/8-16 x 3/4" Soc. Hd. Cap Screw Bk.	26259
172	1	Spacer, Flap Cylinder .700" Thick	915-0415
173	1	Guard, Outer Barrier Sensor Wires	915-0368N50Y
174	4	Snap-Ring 1/2"	13273
175	4	Screw, #10-32 x 1/2" Button Head, Socket, Cap	30375WP
176	1	Position Sensor Spacer	31092
177	4	Weld Nut, #4-40 x 1/8" Barrel	32949
178	2	Bolt, Carriage, 1/4-20 x 1/2"	12777
179	1	Bracket, Hanger, Hand Pendant	33215
180	1	Shim, Bracket, Hanger, Hand Pendant	33216
181	2	Screw, #10-32 x 1/2" FHDHXS, Black w/Patch	17192P
182	2	Bolt, 1/4-20 x 1", Hex	10001
183	2	Nut, 1/4-20, Hex	10057

NOTES

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Service Manual for: NL **Series A5**

Millennium Series Public Use Wheelchair Lifts

Braun™ Five-Year Limited Warranty

The Braun Corporation of Winamac, Indiana, warrants that it will repair (or replace at Braun's sole option) any defect in material or workmanship in its wheelchair lift for five years*, providing the lift is installed, operated and maintained properly. This warranty is limited to the original purchaser and does not cover defects in the motor vehicle on which it is installed, or defects in the lift caused by a defect in any part of the motor vehicle.

This warranty commences on the date the lift is put in service, providing the warranty registration card is completed and received by The Braun Corporation within 20 days of purchase. If no warranty card is received, the warranty will expire three years from the date of manufacture as identified on the lift serial number tag.

This warranty also covers the cost of labor for the repair (or replacement at Braun's sole option) of parts for three years when performed by an authorized Braun representative. (A labor schedule determines cost allowance for repairs and is available upon request).

This warranty does not cover normal maintenance, service, or periodic adjustments necessitated by use or wear. The Braun Corporation will not, under any circumstances, pay for loss of use, incidental, or consequential damages related to the lift or vehicle in which it is installed.

This warranty will become null and void if the lift has been damaged through accident, misuse, or neglect, or if the lift has been altered in any respect.

* The five-year portion of this warranty covers the following lift's power train parts:
▪ Cable ▪ Cylinder ▪ Flow Control ▪ Gear Box ▪ Motor ▪ Pump ▪ Hydraulic Hose & Fittings
▪ Solid State Controller

All remaining lift components are covered by a three-year warranty.

Return Authorization Procedure

When processing any warranty claims (parts, repairs, etc.), all requests must be processed through The Braun Corporation Product Support Department. Call 1-800-THE LIFT® during normal working hours. Product Support will issue a Return Material Authorization (RMA) number and detail the procedures required for processing returns and/or authorizing credit.

The lift identification information is provided on the Braun Serial No./Series No. identification tag and the two warranty cards (shown on inside front cover). The lift identification information must be provided when filing a warranty claim or ordering parts.

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January 2008

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Braun NL Series

All illustrations, descriptions and specifications in this manual are based on the latest product information available at the time of publication. The Braun Corporation reserves the right to make changes at any time without notice.

Patent #5,261,779 **Patent #6,464,447** **Patent #6,739,824**
Patent #6,065,924 **Patent #6,599,079** **Patents Pending**
Patent #6,238,169 **Patent #6,692,217** **© The Braun Corporation**